



# EXTENDED PHENOLIC CALIBRATION SOLUTION CS1 (UNLABELED/<sup>13</sup>C, 99%)

## Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 20/06/2014

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:

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**ES-5510-CS1**

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

Product form : Mixtures  
Product name. : EXTENDED PHENOLIC CALIBRATION SOLUTION CS1 (UNLABELED/<sup>13</sup>C, 99%)  
Product code : ES-5510-CS1

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### 1.2.1. Relevant identified uses

Industrial/Professional use spec : For professional use only.  
Industrial.

#### 1.2.2. Uses advised against

No additional information available

### 1.3. Details of the supplier of the safety data sheet

Cambridge Isotope Laboratories, Inc.  
50 Frontage Road  
Andover, MA 01810  
USA

USA: 1-800-322-1174 Int: 1-978-749-8000  
[cilsales@isotope.com](mailto:cilsales@isotope.com) [www.isotope.com](http://www.isotope.com)

### Emergency telephone number

Emergency numbers:

Chemtrec: 1-800-424-9300 (24 hours)  
International: 1-202-483-7616 (24 hours)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 2	H225
Skin Irrit. 2	H315
Eye Irrit. 2	H319
Carc. 2	H351
STOT SE 3	H336
Repr. 2	H361d

Full text of H-phrases: see section 16

#### Classification according to Directive 67/548/EEC or 1999/45/EC

Carc.Cat.3; R40  
F; R11  
Xn; R20  
Xn; R65

Full text of R-phrases: see section 16

#### Classification (GHS-US)

Flam. Liq. 2	H225
Skin Irrit. 2	H315
Eye Irrit. 2A	H319
Carc. 2	H351
Repr. 2	H361
STOT SE 3	H336
Aquatic Acute 2	H401

#### Adverse physicochemical, human health and environmental effects

No additional information available

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### 2.2. Label elements

#### Labeling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



Signal word (CLP)

Hazardous ingredients

Hazard statements (CLP)

Precautionary statements (CLP)

- : Danger
- : TOLUENE UNLABELED
- : H225 - Highly flammable liquid and vapor  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H336 - May cause drowsiness or dizziness  
H351 - Suspected of causing cancer  
H361 - Suspected of damaging the unborn child
- : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
P233 - Keep container tightly closed  
P240 - Ground/bond container and receiving equipment  
P241 - Use explosion-proof electrical, lighting, ventilating equipment  
P261 - Avoid breathing dust, fume, gas, mist, spray, vapors  
P264 - Wash Both hands thoroughly after handling  
P271 - Use only outdoors or in a well-ventilated area  
P280 - Wear protective clothing, protective gloves

#### GHS-US labeling

Hazard pictograms (GHS-US)



Signal word (GHS-US)

Hazard statements (GHS-US)

Precautionary statements (GHS-US)

- : Danger
- : H225 - Highly flammable liquid and vapor  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H336 - May cause drowsiness or dizziness  
H351 - Suspected of causing cancer (Dermal, Inhalation, oral)  
H361 - Suspected of damaging fertility or the unborn child (Dermal, oral, Inhalation)  
H401 - Toxic to aquatic life
- : P201 - Obtain special instructions before use  
P202 - Do not handle until all safety precautions have been read and understood  
P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking  
P233 - Keep container tightly closed  
P240 - Ground/bond container and receiving equipment  
P241 - Use explosion-proof electrical, lighting, ventilating equipment  
P242 - Use only non-sparking tools  
P243 - Take precautionary measures against static discharge  
P261 - Avoid breathing dust, fume, gas, mist, spray, vapors  
P264 - Wash Both hands thoroughly after handling  
P271 - Use only outdoors or in a well-ventilated area  
P273 - Avoid release to the environment  
P280 - Wear protective clothing, protective gloves  
P302+P352 - IF ON SKIN: Wash with plenty of soap and water  
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P308+P313 - IF exposed or concerned: Get medical advice/attention  
P312 - Call a POISON CENTER/doctor/physician if you feel unwell  
P321 - Specific treatment (see Hazard pictograms (CLP) on this label)  
P332+P313 - If skin irritation occurs: Get medical advice/attention

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P337+P313 - If eye irritation persists: Get medical advice/attention  
P362 - Take off contaminated clothing and wash before reuse  
P370+P378 - In case of fire: Use Carbon dioxide., Dry chemical., Alcohol resistant foam., Water spray for extinction  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed  
P403+P235 - Store in a well-ventilated place. Keep cool  
P405 - Store locked up  
P501 - Dispose of contents/container to Comply with applicable regulations.

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

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### 3.2. Mixtures

Name	Product identifier	%	Classification according to Directive 67/548/EEC
N-NONANE UNLABELED	(CAS No)111-84-2 (Unlabeled) (EC no)203-913-4	97.40719544	R10 Xn; R20 Xn; R65 R67
TOLUENE UNLABELED	(CAS No)108-88-3 (EC no)203-625-9 (EC index no)601-021-00-3	2.59233782	Repr.Cat.3; R62 Repr.Cat.3; R63 F; R11 Xi; R36/38 Carc.Cat.3; R40 N; R51 Xn; R20 R67 Xn; R65
METHYL TRICLOSAN (RING-13C12, 99%)	(CAS No)4640-01-1 (Unlabeled)	0.00014584	Xn; R20/21/22 N; R50/53
PENTACHLOROANISOLE (13C6, 99%)	(CAS No)1825-21-4 (unlabeled)	0.00014514	Xn; R22 N; R50/53
2,4-DIBROMOANISOLE (RING-13C6, 99%)	(CAS No)21702-84-1 (Unlabeled) (EC no)244-536-5	0.00001462	Xi; R36/37/38
2,4,6-TRIBROMOANISOLE (RING-13C6, 99%)	(CAS No)607-99-8 (Unlabeled)	0.00001445	R53
2,4,5-TRIBROMOANISOLE (RING-13C6, 99%)	(CAS No)95970-10-8 (Unlabeled)	0.00001444	R53
4-METHOXY-2,2',3,4',5,5',6-HEXACB (13C12, 99%)	(CAS No)169295-19-6 (Unlabeled) (EC index no)602-039-00-4	0.00001437	Xn; R48/20/21/22 N; R50/53
4-METHOXY-2,2',3,4',5,5',6-HEPTACB (13C12, 99%)	(CAS No)1629523-2 (Unlabeled) (EC index no)602-039-00-4	0.00001433	Xn; R48/20/21/22 N; R50/53
PENTABROMOANISOLE (13C6, 99%)	(CAS No)1825-26-9 (Unlabeled)	0.00001426	R53
6-METHOXY-2,2',4,4'-TETRABDE (RING-13C12, 99%)	(CAS No)102739-99-1 (Unlabeled)	0.00001425	T; R23 Xn; R22 Xi; R36/37/38
4-METHOXY-2,3,3',4',5-PENTACB (13C12, 99%)	(CAS No)169295-14-1 (Unlabeled) (EC index no)602-039-00-4	0.00001422	Xn; R48/20/21/22 N; R50/53
6'-METHOXY-2,2',4,4',6-PENTABDE (13C12, 99%)	(CAS No)1391119-70-2 (Unlabeled)	0.0000142	Xn; R20/21/22 Xi; R36/37/38
2,2',3,3',4,5,5',6,6'-NONACB (PCB-208) (13C12, 99%)	(CAS No)52663-77-1 (Unlabeled)	0.00001387	Not classified
3,3',4,4'-TETRABDE (BDE-77) (13C12, 99%)	(CAS No)93703-48-1 (Unlabeled)	0.0000104	Xn; R20/21/22 Xi; R36/37/38
2,2',3,4,4',6-HEXABDE (BDE-139) (13C12, 99%)	(CAS No)36483-60-0 (Unlabeled)	0.0000104	Xn; R20/21/22 Xi; R36/37/38
DIMETHYL TETRABROMOBISPHENOL A (RING-13C12, 99%)	(CAS No)37853-61-5 (Unlabeled) (EC no)201-236-9	0.00000729	Xi; R36/37/38 N; R50
1,2,3,4-TETRACHLORODIBENZO-P-DIOXIN (13C6, 99%)	(CAS No)30746-58-8 (Unlabeled)	0.00000347	Carc.Cat.1; R45 Carc.Cat.1; R49 Xn; R20 Xn; R21 Xn; R22
METHYL TRICLOSAN UNLABELED	(CAS No)4640-01-1	0.00000029	Xn; R20/21/22 N; R50/53
PENTACHLOROANISOLE UNLABELED	(CAS No)1825-21-4 (Unlabeled)	0.00000029	Xn; R22 N; R50/53
6-METHOXY-2,2',4,4'-TETRABDE UNLABELED	(CAS No)102739-99-1	0.00000003	T; R23 Xn; R22 Xi; R36/37/38
2,4,6-TRIBROMOANISOLE UNLABELED	(CAS No)607-99-8	0.00000003	R53

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Name	Product identifier	%	Classification according to Directive 67/548/EEC
2,4,5-TRIBROMOANISOLE UNLABELED	(CAS No)95970-10-8 (Unlabeled)	0.00000003	R53
PENTABROMOANISOLE UNLABELED	(CAS No)1825-26-9	0.00000003	R53
2,4-DIBROMOANISOLE UNLABELED	(CAS No)21702-84-1 (EC no)244-536-5	0.00000003	Xi; R36/37/38
4-METHOXY-2,3,3',4',5-PENTACB UNLABELED	(CAS No)169295-14-1 (Unlabeled) (EC index no)602-039-00-4	0.00000003	Xn; R48/20/21/22 N; R50/53
4-METHOXY-2,2',3,4',5'-HEXACB UNLABELED	(CAS No)169295-19-6 (Unlabeled) (EC index no)602-039-00-4	0.00000003	Xn; R48/20/21/22 N; R50/53
4-METHOXY-2,2',3,4'-TETRABDE UNLABELED	(CAS No)602326-25-0 (Unlabeled)	0.00000003	Xn; R48/21/22 N; R50/53
4-METHOXY-2,2',3,4',5',6-HEPTACB UNLABELED	(CAS No)169295-23-2 (Unlabeled) (EC index no)602-039-00-4	0.00000003	Xn; R48/20/21/22 N; R50/53
3-METHOXY-2,2',4,4'-TETRABDE UNLABELED	(CAS No)602326-28-0 (Unlabeled)	0.00000003	Xn; R20/21/22 N; R50/53
5-METHOXY-2,2',4,4'-TETRABDE UNLABELED	(CAS No)602326-19-2 (Unlabeled)	0.00000003	Xn; R20/21/22 N; R50/53
4'-METHOXY-2,2',4,5'-TETRABDE UNLABELED	(CAS No)476430-88-3 (Unlabeled)	0.00000003	Xn; R20/21/22 Xi; R36/37/38
5'-METHOXY-2,2',4,4',5-PENTABDE UNLABELED	(CAS No)923925-51-3 (Unlabeled)	0.00000003	Carc.Cat.1; R45 Carc.Cat.1; R49 Xn; R20 Xn; R21 Xn; R22 N; R50
6-METHOXY-2,2',4,4',5-PENTABDE UNLABELED	(CAS No)497106-83-9 (Unlabeled)	0.00000003	Carc.Cat.1; R45 Carc.Cat.1; R49 Xn; R20 Xn; R21 Xn; R22 N; R50
DIMETHYL TETRABROMOBISPHENOL A UNLABELED	(CAS No)37853-61-5 (EC no)201-236-9	0.00000001	Xi; R36/37/38 N; R50

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
N-NONANE UNLABELED	(CAS No)111-84-2 (Unlabeled) (EC no)203-913-4	97.40719544	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H336 Asp. Tox. 1, H304
TOLUENE UNLABELED	(CAS No)108-88-3 (EC no)203-625-9 (EC index no)601-021-00-3	2.59233782	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Carc. 2, H351 Repr. 2, H361d STOT SE 3, H336 STOT SE 2, H371 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Acute 1, H400
METHYL TRICLOSAN (RING-13C12, 99%)	(CAS No)4640-01-1 (Unlabeled)	0.00014584	Aquatic Acute 1, H400
PENTACHLOROANISOLE (13C6, 99%)	(CAS No)1825-21-4 (unlabeled)	0.00014514	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
2,4-DIBROMOANISOLE (RING-13C6, 99%)	(CAS No)21702-84-1 (Unlabeled) (EC no)244-536-5	0.00001462	Skin Irrit. 2, H315
2,4,6-TRIBROMOANISOLE (RING-13C6, 99%)	(CAS No)607-99-8 (Unlabeled)	0.00001445	Aquatic Chronic 4, H413
2,4,5-TRIBROMOANISOLE (RING-13C6, 99%)	(CAS No)95970-10-8 (Unlabeled)	0.00001444	Aquatic Chronic 4, H413

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4-METHOXY-2,2',3,4',5,5'-HEXACB (13C12, 99%)	(CAS No)169295-19-6 (Unlabeled) (EC index no)602-039-00-4	0.00001437	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
4-METHOXY-2,2',3,4',5,5',6-HEPTACB (13C12, 99%)	(CAS No)1629523-2 (Unlabeled) (EC index no)602-039-00-4	0.00001433	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
PENTABROMOANISOLE (13C6, 99%)	(CAS No)1825-26-9 (Unlabeled)	0.00001426	Aquatic Chronic 4, H413
6-METHOXY-2,2',4,4'-TETRABDE (RING-13C12, 99%)	(CAS No)102739-99-1 (Unlabeled)	0.00001425	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Acute Tox. 1 (Inhalation:vapour), H330 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
4-METHOXY-2,3,3',4',5-PENTACB (13C12, 99%)	(CAS No)169295-14-1 (Unlabeled) (EC index no)602-039-00-4	0.00001422	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
6'-METHOXY-2,2',4,4',6-PENTABDE (13C12, 99%)	(CAS No)1391119-70-2 (Unlabeled)	0.0000142	Not classified
2,2',3,3',4,5,5',6,6'-NONACB (PCB-208) (13C12, 99%)	(CAS No)52663-77-1 (Unlabeled)	0.00001387	Not classified
3,3',4,4'-TETRABDE (BDE-77) (13C12, 99%)	(CAS No)93703-48-1 (Unlabeled)	0.0000104	Not classified
2,2',3,4,4',6-HEXABDE (BDE-139) (13C12, 99%)	(CAS No)36483-60-0 (Unlabeled)	0.0000104	Not classified
DIMETHYL TETRABROMOBISPHENOL A (RING-13C12, 99%)	(CAS No)37853-61-5 (Unlabeled) (EC no)201-236-9	0.00000729	Skin Irrit. 2, H315 STOT SE 3, H336 Aquatic Acute 1, H400
1,2,3,4-TETRACHLORODIBENZO-P-DIOXIN (13C6, 99%)	(CAS No)30746-58-8 (Unlabeled)	0.00000347	Carc. 1A, H350 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312
METHYL TRICLOSAN UNLABELED	(CAS No)4640-01-1	0.00000029	Aquatic Acute 1, H400
PENTACHLOROANISOLE UNLABELED	(CAS No)1825-21-4 (Unlabeled)	0.00000029	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
6-METHOXY-2,2',4,4'-TETRABDE UNLABELED	(CAS No)102739-99-1	0.00000003	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Acute Tox. 2 (Inhalation:vapour), H330 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
2,4,6-TRIBROMOANISOLE UNLABELED	(CAS No)607-99-8	0.00000003	Aquatic Chronic 4, H413
2,4,5-TRIBROMOANISOLE UNLABELED	(CAS No)95970-10-8 (Unlabeled)	0.00000003	Aquatic Chronic 4, H413
PENTABROMOANISOLE UNLABELED	(CAS No)1825-26-9	0.00000003	Aquatic Chronic 4, H413
2,4-DIBROMOANISOLE UNLABELED	(CAS No)21702-84-1 (EC no)244-536-5	0.00000003	Skin Irrit. 2, H315
4-METHOXY-2,3,3',4',5-PENTACB UNLABELED	(CAS No)169295-14-1 (Unlabeled) (EC index no)602-039-00-4	0.00000003	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
4-METHOXY-2,2',3,4',5,5'-HEXACB UNLABELED	(CAS No)169295-19-6 (Unlabeled) (EC index no)602-039-00-4	0.00000003	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
4-METHOXY-2,2',3,4'-TETRABDE UNLABELED	(CAS No)602326-25-0 (Unlabeled)	0.00000003	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 STOT SE 2, H371 Aquatic Chronic 1, H410
4-METHOXY-2,2',3,4',5,5',6-HEPTACB UNLABELED	(CAS No)169295-23-2 (Unlabeled) (EC index no)602-039-00-4	0.00000003	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
3-METHOXY-2,2',4,4'-TETRABDE UNLABELED	(CAS No)602326-28-0 (Unlabeled)	0.00000003	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312
5-METHOXY-2,2',4,4'-TETRABDE UNLABELED	(CAS No)602326-19-2 (Unlabeled)	0.00000003	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312
4'-METHOXY-2,2',4,5'-TETRABDE UNLABELED	(CAS No)476430-88-3 (Unlabeled)	0.00000003	Not classified
5'-METHOXY-2,2',4,4',5-PENTABDE UNLABELED	(CAS No)923925-51-3 (Unlabeled)	0.00000003	Carc. 1A, H350 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312 Aquatic Acute 1, H400

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
6-METHOXY-2,2',4,4',5-PENTABDE UNLABELED	(CAS No)497106-83-9 (Unlabeled)	0.00000003	Carc. 1A, H350 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312 Aquatic Acute 1, H400
DIMETHYL TETRABROMOBISPHENOL A UNLABELED	(CAS No)37853-61-5 (EC no)201-236-9	0.00000001	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 1, H400 (M=10)

Name	Product identifier	%	Classification (GHS-US)
N-NONANE UNLABELED	(CAS No)111-84-2 (Unlabeled)	97.40719544	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H336 Asp. Tox. 1, H304
TOLUENE UNLABELED	(CAS No)108-88-3	2.59233782	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Carc. 2, H351 Repr. 2, H361 STOT SE 3, H336 STOT SE 2, H371 Asp. Tox. 1, H304 Aquatic Acute 1, H400

Full text of R-, H- and EUH-phrases: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Assure fresh air breathing. Allow the victim to rest.
- First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

### 4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

- suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

No additional information available

### 5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

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### 6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.  
Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store at room temperature away from light and moisture.  
Incompatible products : Strong bases. strong acids.  
Incompatible materials : Sources of ignition. Direct sunlight.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

N-NONANE UNLABELED (111-84-2 (Unlabeled))		
Italy - Portugal- USA ACGIH	ACGIH TWA (ppm)	200.0000000000 ppm Central Nervous System impairment.
TOLUENE UNLABELED (108-88-3)		
Italy - Portugal- USA ACGIH	ACGIH TWA (ppm)	20.0000000000 ppm Visual impairment, Female reproductive, Pregnancy loss
USA OSHA	OSHA PEL (TWA) (ppm)	100.0000000000 ppm USA. OSHA - TABLE Z-1 Limits for Air Contaminants 1910.1000
USA OSHA	OSHA PEL (STEL) (ppm)	150.0000000000 ppm USA. OSHA - TABLE Z-1 Limits for Air Contaminants 1910.1000

### 8.2. Exposure controls

Personal protective equipment : Avoid all unnecessary exposure. Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus.



Hand protection : Wear protective gloves.  
Eye protection : Chemical goggles or safety glasses.  
Respiratory protection : Wear approved mask.  
Other information : When using, do not eat, drink or smoke.



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### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid.
Color	: Colorless.
Odor	: characteristic.
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: -53 °C (- 63 °F) - lit
Freezing point	: No data available
Boiling point	: 151 °C (304 °F) - lit
Flash point	: 31.0 °C (87.8 °F) - closed cup
Self ignition temperature	: 205 °C (401 °F)
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: 12.4 hPa (9.3 mmHg) at 37.7 °C (99.9 °F)
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: Water: 0 %
Log Pow	: 5.65
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: 0.87 - 2.9 % (V)

#### 9.2. Other information

No additional information available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No additional information available

#### 10.2. Chemical stability

See storage and expiration date on CoA.

#### 10.3. Possibility of hazardous reactions

Not established.

#### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

#### 10.5. Incompatible materials

strong acids. Strong bases.

#### 10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Not classified

#### 6-METHOXY-2,2',4,4'-TETRABDE UNLABELED (102739-99-1)

ATE (oral)	500.000 mg/kg body weight
ATE (vapors)	0.500 mg/l/4h

#### N-NONANE UNLABELED (111-84-2 (Unlabeled))

LC50 inhalation rat (ppm)	3200 ppm/4h
ATE (dust, mist)	1.500 mg/l/4h

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<b>TOLUENE UNLABELED (108-88-3)</b>	
LD50 oral rat	> 5580 mg/kg
LD50 dermal rabbit	12196 mg/kg
LC50 inhalation rat (mg/l)	12500 - 28800 mg/m <sup>3</sup> 4 h
ATE (dermal)	12196.000 mg/kg body weight
ATE (gases)	4500.000 ppmV/4h
ATE (vapors)	12.500 mg/l/4h
ATE (dust, mist)	1.500 mg/l/4h

<b>6-METHOXY-2,2',4,4'-TETRABDE (RING-13C12, 99%) (102739-99-1 (Unlabeled))</b>	
ATE (oral)	500.000 mg/kg body weight
ATE (vapors)	0.050 mg/l/4h

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Suspected of causing cancer.
Reproductive toxicity	: Suspected of damaging the unborn child.
Specific target organ toxicity (single exposure)	: May cause drowsiness or dizziness.
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

### 12.1. Toxicity

<b>DIMETHYL TETRABROMOBISPHENOL A UNLABELED (37853-61-5)</b>	
LC50 fish 1	0.06 mg/l Pimephales promelas (fathead minnow) - 96 h
EC50 Daphnia 1	7.9 mg/l Daphnia magna (Water flea) - 48 h

<b>PENTACHLOROANISOLE (13C6, 99%) (1825-21-4 (unlabeled))</b>	
LC50 fish 1	0.65 mg/l Pimephales promelas (fathead minnow) - 96 h
EC50 Daphnia 1	0.027 mg/l Daphnia magna (Water flea) - 48 h

<b>TOLUENE UNLABELED (108-88-3)</b>	
LC50 fish 1	74 - 340 mg/l Lepomis macrochirus (Bluegill) - 96h
LC50 other aquatic organisms 1	10 mg/l Pseudokirchneriella subcapitata (Green algae) - 24 h
EC50 Daphnia 1	8 mg/l Daphnia magna (Water flea) - 24h
LC50 fish 2	7.63 mg/l Oncorhynchus mykiss (Rainbow trout) - 96 h
EC50 Daphnia 2	6 mg/l Daphnia magna (Water flea) - Immobilization - 48 h
ErC50 (algae)	245 mg/l Chlorella vulgaris (Fresh water algae) - 24 h
LOEC (chronic)	8.04 mg/l Pimephales promelas (Fathead minnow) - 7 d
NOEC (chronic)	5.44 mg/l Pimephales promelas (fathead minnow) - 7 d

<b>PENTACHLOROANISOLE UNLABELED (1825-21-4 (Unlabeled))</b>	
LC50 fish 1	0.65 mg/l Pimephales promelas (fathead minnow) - 96 h
EC50 Daphnia 1	0.027 mg/l Daphnia magna (Water flea) - 48 h

<b>DIMETHYL TETRABROMOBISPHENOL A (RING-13C12, 99%) (37853-61-5 (Unlabeled))</b>	
LC50 fish 1	0.06 mg/l Pimephales promelas (fathead minnow) - 96 h
EC50 Daphnia 1	7.9 mg/l Daphnia magna (Water flea) - 48 h

### 12.2. Persistence and degradability

<b>EXTENDED PHENOLIC CALIBRATION SOLUTION CS1 (UNLABELED/<sup>13</sup>C, 99%)</b>	
Persistence and degradability	Not established.

<b>6-METHOXY-2,2',4,4'-TETRABDE UNLABELED (102739-99-1)</b>	
Persistence and degradability	Not available.

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<b>DIMETHYL TETRABROMOBISPHENOL A UNLABELED (37853-61-5)</b>	
Persistence and degradability	Not available.
<b>METHYL TRICLOSAN (RING-<sup>13</sup>C<sub>12</sub>, 99%) (4640-01-1 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>METHYL TRICLOSAN UNLABELED (4640-01-1)</b>	
Persistence and degradability	Not available.
<b>PENTACHLOROANISOLE (13C<sub>6</sub>, 99%) (1825-21-4 (unlabeled))</b>	
Persistence and degradability	Not available.
<b>N-NONANE UNLABELED (111-84-2 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>PENTACHLOROANISOLE UNLABELED (1825-21-4 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>2,4,6-TRIBROMOANISOLE UNLABELED (607-99-8)</b>	
Persistence and degradability	Not available.
<b>2,4,5-TRIBROMOANISOLE UNLABELED (95970-10-8 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>2,4,6-TRIBROMOANISOLE (RING-<sup>13</sup>C<sub>6</sub>, 99%) (607-99-8 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>PENTABROMOANISOLE (13C<sub>6</sub>, 99%) (1825-26-9 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>PENTABROMOANISOLE UNLABELED (1825-26-9)</b>	
Persistence and degradability	Not available.
<b>2,4-DIBROMOANISOLE (RING-<sup>13</sup>C<sub>6</sub>, 99%) (21702-84-1 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>2,4-DIBROMOANISOLE UNLABELED (21702-84-1)</b>	
Persistence and degradability	Not available.
<b>6-METHOXY-2,2',4,4'-TETRABDE (RING-<sup>13</sup>C<sub>12</sub>, 99%) (102739-99-1 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>DIMETHYL TETRABROMOBISPHENOL A (RING-<sup>13</sup>C<sub>12</sub>, 99%) (37853-61-5 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,3,3',4',5-PENTACB UNLABELED (169295-14-1 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,3,3',4',5-PENTACB (13C<sub>12</sub>, 99%) (169295-14-1 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,2',3,4',5,5'-HEXACB UNLABELED (169295-19-6 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,2',3,4',5,5'-HEXACB (13C<sub>12</sub>, 99%) (169295-19-6 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,2',3,4'-TETRABDE UNLABELED (602326-25-0 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,2',3,4',5,5',6-HEPTACB UNLABELED (169295-23-2 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,2',3,4',5,5',6-HEPTACB (13C<sub>12</sub>, 99%) (1629523-2 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>3-METHOXY-2,2',4,4'-TETRABDE UNLABELED (602326-28-0 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>5-METHOXY-2,2',4,4'-TETRABDE UNLABELED (602326-19-2 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4'-METHOXY-2,2',4,5'-TETRABDE UNLABELED (476430-88-3 (Unlabeled))</b>	

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Persistence and degradability	Not available.
<b>5'-METHOXY-2,2',4,4',5-PENTABDE UNLABELED (923925-51-3 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>6-METHOXY-2,2',4,4',5-PENTABDE UNLABELED (497106-83-9 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>6'-METHOXY-2,2',4,4',6-PENTABDE (13C12, 99%) (1391119-70-2 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>1,2,3,4-TETRACHLORODIBENZO-P-DIOXIN (13C6, 99%) (30746-58-8 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>3,3',4,4'-TETRABDE (BDE-77) (13C12, 99%) (93703-48-1 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>2,2',3,4,4',6-HEXABDE (BDE-139) (13C12, 99%) (36483-60-0 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>2,4,5-TRIBROMOANISOLE (RING-13C6, 99%) (95970-10-8 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>12.3. Bioaccumulative potential</b>	
<b>EXTENDED PHENOLIC CALIBRATION SOLUTION CS1 (UNLABELED/<sup>13</sup>C, 99%)</b>	
Log Pow	5.65
Bioaccumulative potential	Not established.
<b>6-METHOXY-2,2',4,4'-TETRABDE UNLABELED (102739-99-1)</b>	
Bioaccumulative potential	Not available.
<b>DIMETHYL TETRABROMOBISPHENOL A UNLABELED (37853-61-5)</b>	
Bioaccumulative potential	Not available.
<b>METHYL TRICLOSAN (RING-13C12, 99%) (4640-01-1 (Unlabeled))</b>	
Log Pow	5.269
Bioaccumulative potential	Not available.
<b>METHYL TRICLOSAN UNLABELED (4640-01-1)</b>	
Log Pow	5.269
Bioaccumulative potential	Not available.
<b>PENTACHLOROANISOLE (13C6, 99%) (1825-21-4 (unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>N-NONANE UNLABELED (111-84-2 (Unlabeled))</b>	
Log Pow	5.65
Bioaccumulative potential	Indication of bioaccumulation.
<b>TOLUENE UNLABELED (108-88-3)</b>	
Bioaccumulative potential	Not available.
<b>PENTACHLOROANISOLE UNLABELED (1825-21-4 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>2,4-DIBROMOANISOLE (RING-13C6, 99%) (21702-84-1 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>2,4-DIBROMOANISOLE UNLABELED (21702-84-1)</b>	
Bioaccumulative potential	Not available.
<b>6-METHOXY-2,2',4,4'-TETRABDE (RING-13C12, 99%) (102739-99-1 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>DIMETHYL TETRABROMOBISPHENOL A (RING-13C12, 99%) (37853-61-5 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4-METHOXY-2,3,3',4',5-PENTACB UNLABELED (169295-14-1 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4-METHOXY-2,3,3',4',5-PENTACB (13C12, 99%) (169295-14-1 (Unlabeled))</b>	
Bioaccumulative potential	Not available.

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<b>4-METHOXY-2,2',3,4',5,5'-HEXACB UNLABELED (169295-19-6 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4-METHOXY-2,2',3,4',5,5'-HEXACB (13C12, 99%) (169295-19-6 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4-METHOXY-2,2',3,4'-TETRABDE UNLABELED (602326-25-0 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4-METHOXY-2,2',3,4',5,5',6-HEPTACB UNLABELED (169295-23-2 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4-METHOXY-2,2',3,4',5,5',6-HEPTACB (13C12, 99%) (1629523-2 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>3-METHOXY-2,2',4,4'-TETRABDE UNLABELED (602326-28-0 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>5-METHOXY-2,2',4,4'-TETRABDE UNLABELED (602326-19-2 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4'-METHOXY-2,2',4,5'-TETRABDE UNLABELED (476430-88-3 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>5'-METHOXY-2,2',4,4',5-PENTABDE UNLABELED (923925-51-3 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>6-METHOXY-2,2',4,4',5-PENTABDE UNLABELED (497106-83-9 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>6'-METHOXY-2,2',4,4',6-PENTABDE (13C12, 99%) (1391119-70-2 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>1,2,3,4-TETRACHLORODIBENZO-P-DIOXIN (13C6, 99%) (30746-58-8 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>3,3',4,4'-TETRABDE (BDE-77) (13C12, 99%) (93703-48-1 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>2,2',3,4,4',6-HEXABDE (BDE-139) (13C12, 99%) (36483-60-0 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>12.4. Mobility in soil</b>	
<b>6-METHOXY-2,2',4,4'-TETRABDE UNLABELED (102739-99-1)</b>	
Ecology - soil	Not available.
<b>DIMETHYL TETRABROMOBISPHENOL A UNLABELED (37853-61-5)</b>	
Ecology - soil	Not available.
<b>METHYL TRICLOSAN (RING-13C12, 99%) (4640-01-1 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>METHYL TRICLOSAN UNLABELED (4640-01-1)</b>	
Ecology - soil	Not available.
<b>PENTACHLOROANISOLE (13C6, 99%) (1825-21-4 (unlabeled))</b>	
Ecology - soil	Not available.
<b>N-NONANE UNLABELED (111-84-2 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>TOLUENE UNLABELED (108-88-3)</b>	
Ecology - soil	Not available.
<b>PENTACHLOROANISOLE UNLABELED (1825-21-4 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>2,4,6-TRIBROMOANISOLE UNLABELED (607-99-8)</b>	
Ecology - soil	Not available.
<b>2,4,5-TRIBROMOANISOLE UNLABELED (95970-10-8 (Unlabeled))</b>	
Ecology - soil	Not available.

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<b>2,4,6-TRIBROMOANISOLE (RING-13C6, 99%) (607-99-8 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>PENTABROMOANISOLE (13C6, 99%) (1825-26-9 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>PENTABROMOANISOLE UNLABELED (1825-26-9)</b>	
Ecology - soil	Not available.
<b>2,4-DIBROMOANISOLE (RING-13C6, 99%) (21702-84-1 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>2,4-DIBROMOANISOLE UNLABELED (21702-84-1)</b>	
Ecology - soil	Not available.
<b>6-METHOXY-2,2',4,4'-TETRABDE (RING-13C12, 99%) (102739-99-1 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>DIMETHYL TETRABROMOBISPHENOL A (RING-13C12, 99%) (37853-61-5 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,3,3',4',5-PENTACB UNLABELED (169295-14-1 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,3,3',4',5-PENTACB (13C12, 99%) (169295-14-1 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,2',3,4',5,5'-HEXACB UNLABELED (169295-19-6 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,2',3,4',5,5'-HEXACB (13C12, 99%) (169295-19-6 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,2',3,4'-TETRABDE UNLABELED (602326-25-0 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,2',3,4',5,5',6-HEPTACB UNLABELED (169295-23-2 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,2',3,4',5,5',6-HEPTACB (13C12, 99%) (1629523-2 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>3-METHOXY-2,2',4,4'-TETRABDE UNLABELED (602326-28-0 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>5-METHOXY-2,2',4,4'-TETRABDE UNLABELED (602326-19-2 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4'-METHOXY-2,2',4,5'-TETRABDE UNLABELED (476430-88-3 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>5'-METHOXY-2,2',4,4',5-PENTABDE UNLABELED (923925-51-3 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>6-METHOXY-2,2',4,4',5-PENTABDE UNLABELED (497106-83-9 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>6'-METHOXY-2,2',4,4',6-PENTABDE (13C12, 99%) (1391119-70-2 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>1,2,3,4-TETRACHLORODIBENZO-P-DIOXIN (13C6, 99%) (30746-58-8 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>3,3',4,4'-TETRABDE (BDE-77) (13C12, 99%) (93703-48-1 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>2,2',3,4,4',6-HEXABDE (BDE-139) (13C12, 99%) (36483-60-0 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>2,4,5-TRIBROMOANISOLE (RING-13C6, 99%) (95970-10-8 (Unlabeled))</b>	
Ecology - soil	Not available.

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### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

Other information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Regional legislation (waste) : Waste materials should be disposed of under conditions which meet Federal, State, and Local environmental control regulations.

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

### 14.1. UN number

UN-No.(DOT) : UN1920

### 14.2. UN proper shipping name

DOT Proper Shipping Name : Nonanes

Department of Transportation (DOT) Hazard Classes : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

Hazard labels (DOT) : 3 - Flammable liquid



Packing group (DOT) : III - Minor Danger

DOT Special Provisions (49 CFR 172.102) : B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then the bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has a flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable.

IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).

T2 - 1.5 178.274(d)(2) Normal..... 178.275(d)(3)

TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling =  $97 / 1 + a (tr - tf)$  Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.

DOT Packaging Exceptions (49 CFR 173.xxx) : 150

DOT Packaging Non Bulk (49 CFR 173.xxx) : 203

DOT Packaging Bulk (49 CFR 173.xxx) : 242

Marine pollutant : No

### 14.3. Additional information

Other information : No supplementary information available.

# EXTENDED PHENOLIC CALIBRATION SOLUTION CS1 (UNLABELED/13C, 99%) ES-5510-CS1

## Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### Overland transport

Packing group (ADR) : III  
Class (ADR) : 3 - Flammable liquid  
Hazard identification number (Kemler No.) : 30  
Classification code (ADR) : F1  
Danger labels (ADR) : 3 - Flammable liquids



Orange plates :

Tunnel restriction code : D/E  
Limited quantities (ADR) : 5L  
EAC : 3Y  
Excepted quantities (ADR) : E1

### Transport by sea

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.  
MFAG-No : 128

### Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 60 L  
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 220 L

### 14.4. Environmental hazards

Other information : No supplementary information available.

### 14.5. Special precautions for user

### 14.6. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### N-NONANE UNLABELED (111-84-2 (Unlabeled))

SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard
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#### TOLUENE UNLABELED (108-88-3)

Listed on SARA Section 313 (Specific toxic chemical listings)	
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard

### 15.2. International regulations

#### CANADA

#### EXTENDED PHENOLIC CALIBRATION SOLUTION CS1 (UNLABELED/13C, 99%)

Listed on the Canadian DSL (Domestic Substances List) inventory.

#### TOLUENE UNLABELED (108-88-3)

Listed on the Canadian DSL (Domestic Substances List) inventory.



# EXTENDED PHENOLIC CALIBRATION SOLUTION CS1 (UNLABELED/<sup>13</sup>C, 99%) ES-5510-CS1

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### 15.2.1. National regulations

No additional information available

### 15.3. US State regulations

#### N-NONANE UNLABELED (111-84-2 (Unlabeled))

U.S. - Massachusetts - Right To Know List  
U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

#### TOLUENE UNLABELED (108-88-3)

U.S. - Massachusetts - Right To Know List  
U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
WARNING! This product contains a chemical known by the state of California to cause birth defects or other reproductive harm.

## SECTION 16: Other information

Other information : None.

# EXTENDED PHENOLIC CALIBRATION SOLUTION CS1 (UNLABELED/<sup>13</sup>C, 99%) ES-5510-CS1

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Full text of R-, H- and EUH-phrases::

Acute Tox. 1 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 1
Acute Tox. 2 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 2
Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Aquatic Chronic 4	Hazardous to the aquatic environment - Chronic Hazard Category 4
Asp. Tox. 1	Aspiration hazard Category 1
Carc. 1A	Carcinogenicity Category 1A
Carc. 2	Carcinogenicity Category 2
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Flam. Liq. 2	Flammable liquids Category 2
Flam. Liq. 3	Flammable liquids Category 3
Repr. 2	Reproductive toxicity Category 2
Skin Irrit. 2	skin corrosion/irritation Category 2
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
STOT SE 2	Specific target organ toxicity (single exposure) Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H225	Highly flammable liquid and vapor
H226	Flammable liquid and vapor
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H312	Harmful in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H330	Fatal if inhaled
H332	Harmful if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H350	May cause cancer
H351	Suspected of causing cancer
H361d	Suspected of damaging the unborn child
H371	May cause damage to organs
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H413	May cause long lasting harmful effects to aquatic life
R10	Flammable
R11	Highly flammable
R20	Harmful by inhalation
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed
R21	Harmful in contact with skin
R22	Harmful if swallowed
R23	Toxic by inhalation
R36/37/38	Irritating to eyes, respiratory system and skin
R36/38	Irritating to eyes and skin
R40	Limited evidence of a carcinogenic effect
R45	May cause cancer
R48/20/21/22	Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed
R48/21/22	Harmful: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed
R49	May cause cancer by inhalation
R50	Very toxic to aquatic organisms
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R51	Toxic to aquatic organisms
R53	May cause long-term adverse effects in the aquatic environment
R62	Possible risk of impaired fertility
R63	Possible risk of harm to the unborn child

# EXTENDED PHENOLIC CALIBRATION SOLUTION CS1 (UNLABELED/<sup>13</sup>C, 99%) ES-5510-CS1

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R65	Harmful: may cause lung damage if swallowed
R67	Vapors may cause drowsiness and dizziness
F	Highly flammable
N	Dangerous for the environment
T	Toxic
Xi	Irritant
Xn	Harmful

CIL Multi-Solvent Mixture SDS

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*



# EXTENDED PHENOLIC CALIBRATION SOLUTION CS2 (UNLABELED/<sup>13</sup>C, 99%)

## Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 25/06/2014

Revision date:

:

Version: 1.0

**ES-5510-CS2**

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

Product form : Mixtures  
Product name. : EXTENDED PHENOLIC CALIBRATION SOLUTION CS2 (UNLABELED/<sup>13</sup>C, 99%)  
Product code : ES-5510-CS2

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### 1.2.1. Relevant identified uses

Industrial/Professional use spec : For professional use only.  
Industrial.

#### 1.2.2. Uses advised against

No additional information available

### 1.3. Details of the supplier of the safety data sheet

Cambridge Isotope Laboratories, Inc.  
50 Frontage Road  
Andover, MA 01810  
USA

USA: 1-800-322-1174 Int: 1-978-749-8000  
[cilsales@isotope.com](mailto:cilsales@isotope.com) [www.isotope.com](http://www.isotope.com)

### Emergency telephone number

Emergency numbers:

Chemtrec: 1-800-424-9300 (24 hours)  
International: 1-202-483-7616 (24 hours)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 2	H225
Skin Irrit. 2	H315
Eye Irrit. 2	H319
Carc. 2	H351
STOT SE 3	H336
Repr. 2	H361d

Full text of H-phrases: see section 16

#### Classification according to Directive 67/548/EEC or 1999/45/EC

Carc.Cat.3; R40  
F; R11  
Xn; R20  
Xn; R65

Full text of R-phrases: see section 16

#### Classification (GHS-US)

Flam. Liq. 2	H225
Skin Irrit. 2	H315
Eye Irrit. 2A	H319
Carc. 2	H351
Repr. 2	H361
STOT SE 3	H336
Aquatic Acute 2	H401

#### Adverse physicochemical, human health and environmental effects

No additional information available

# EXTENDED PHENOLIC CALIBRATION SOLUTION CS2 (UNLABELED/<sup>13</sup>C, 99%) ES-5510-CS2

## Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 2.2. Label elements

#### Labeling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



Signal word (CLP)

Hazardous ingredients

Hazard statements (CLP)

Precautionary statements (CLP)

- : Danger
- : TOLUENE UNLABELED
- : H225 - Highly flammable liquid and vapor  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H336 - May cause drowsiness or dizziness  
H351 - Suspected of causing cancer  
H361 - Suspected of damaging the unborn child
- : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
P233 - Keep container tightly closed  
P240 - Ground/bond container and receiving equipment  
P241 - Use explosion-proof electrical, lighting, ventilating equipment  
P261 - Avoid breathing dust, fume, gas, mist, spray, vapors  
P264 - Wash Both hands thoroughly after handling  
P271 - Use only outdoors or in a well-ventilated area  
P280 - Wear protective clothing, protective gloves

#### GHS-US labeling

Hazard pictograms (GHS-US)



Signal word (GHS-US)

Hazard statements (GHS-US)

Precautionary statements (GHS-US)

- : Danger
- : H225 - Highly flammable liquid and vapor  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H336 - May cause drowsiness or dizziness  
H351 - Suspected of causing cancer (Dermal, Inhalation, oral)  
H361 - Suspected of damaging fertility or the unborn child (Dermal, oral, Inhalation)  
H401 - Toxic to aquatic life
- : P201 - Obtain special instructions before use  
P202 - Do not handle until all safety precautions have been read and understood  
P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking  
P233 - Keep container tightly closed  
P240 - Ground/bond container and receiving equipment  
P241 - Use explosion-proof electrical, lighting, ventilating equipment  
P242 - Use only non-sparking tools  
P243 - Take precautionary measures against static discharge  
P261 - Avoid breathing dust, fume, gas, mist, spray, vapors  
P264 - Wash Both hands thoroughly after handling  
P271 - Use only outdoors or in a well-ventilated area  
P273 - Avoid release to the environment  
P280 - Wear protective clothing, protective gloves  
P302+P352 - IF ON SKIN: Wash with plenty of soap and water  
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P308+P313 - IF exposed or concerned: Get medical advice/attention  
P312 - Call a POISON CENTER/doctor/physician if you feel unwell  
P321 - Specific treatment (see Hazard pictograms (CLP) on this label)  
P332+P313 - If skin irritation occurs: Get medical advice/attention

# EXTENDED PHENOLIC CALIBRATION SOLUTION CS2 (UNLABELED/13C, 99%) ES-5510-CS2

## Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

P337+P313 - If eye irritation persists: Get medical advice/attention  
P362 - Take off contaminated clothing and wash before reuse  
P370+P378 - In case of fire: Use Carbon dioxide., Dry chemical., Alcohol resistant foam., Water spray for extinction  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed  
P403+P235 - Store in a well-ventilated place. Keep cool  
P405 - Store locked up  
P501 - Dispose of contents/container to Comply with applicable regulations.

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

# EXTENDED PHENOLIC CALIBRATION SOLUTION CS2 (UNLABELED/<sup>13</sup>C, 99%) ES-5510-CS2

## Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 3.2. Mixtures

Name	Product identifier	%	Classification according to Directive 67/548/EEC
N-NONANE UNLABELED	(CAS No)111-84-2 (Unlabeled) (EC no)203-913-4	97.40197187	R10 Xn; R20 Xn; R65 R67
TOLUENE UNLABELED	(CAS No)108-88-3 (EC no)203-625-9 (EC index no)601-021-00-3	2.59755991	Repr.Cat.3; R62 Repr.Cat.3; R63 F; R11 Xi; R36/38 Carc.Cat.3; R40 N; R51 Xn; R20 R67 Xn; R65
METHYL TRICLOSAN (RING-13C12, 99%)	(CAS No)4640-01-1 (Unlabeled)	0.00014583	Xn; R20/21/22 N; R50/53
PENTACHLOROANISOLE (13C6, 99%)	(CAS No)1825-21-4 (unlabeled)	0.00014513	Xn; R22 N; R50/53
2,4-DIBROMOANISOLE (RING-13C6, 99%)	(CAS No)21702-84-1 (Unlabeled) (EC no)244-536-5	0.00001462	Xi; R36/37/38
2,4,5-TRIBROMOANISOLE (RING-13C6, 99%)	(CAS No)95970-10-8 (Unlabeled)	0.00001444	R53
2,4,6-TRIBROMOANISOLE (RING-13C6, 99%)	(CAS No)607-99-8 (Unlabeled)	0.00001444	R53
4-METHOXY-2,2',3,4',5,5',6-HEXACB (13C12, 99%)	(CAS No)169295-19-6 (Unlabeled) (EC index no)602-039-00-4	0.00001437	Xn; R48/20/21/22 N; R50/53
4-METHOXY-2,2',3,4',5,5',6-HEPTACB (13C12, 99%)	(CAS No)1629523-2 (Unlabeled) (EC index no)602-039-00-4	0.00001433	Xn; R48/20/21/22 N; R50/53
PENTABROMOANISOLE (13C6, 99%)	(CAS No)1825-26-9 (Unlabeled)	0.00001426	R53
6-METHOXY-2,2',4,4'-TETRABDE (RING-13C12, 99%)	(CAS No)102739-99-1 (Unlabeled)	0.00001425	T; R23 Xn; R22 Xi; R36/37/38
4-METHOXY-2,3,3',4',5-PENTACB (13C12, 99%)	(CAS No)169295-14-1 (Unlabeled) (EC index no)602-039-00-4	0.00001422	Xn; R48/20/21/22 N; R50/53
6'-METHOXY-2,2',4,4',6-PENTABDE (13C12, 99%)	(CAS No)1391119-70-2 (Unlabeled)	0.0000142	Xn; R20/21/22 Xi; R36/37/38
2,2',3,3',4,5,5',6,6'-NONACB (PCB-208) (13C12, 99%)	(CAS No)52663-77-1 (Unlabeled)	0.00001387	Not classified
3,3',4,4'-TETRABDE (BDE-77) (13C12, 99%)	(CAS No)93703-48-1 (Unlabeled)	0.0000104	Xn; R20/21/22 Xi; R36/37/38
2,2',3,4,4',6-HEXABDE (BDE-139) (13C12, 99%)	(CAS No)36483-60-0 (Unlabeled)	0.0000104	Xn; R20/21/22 Xi; R36/37/38
DIMETHYL TETRABROMOBISPHENOL A (RING-13C12, 99%)	(CAS No)37853-61-5 (Unlabeled) (EC no)201-236-9	0.00000729	Xi; R36/37/38 N; R50
1,2,3,4-TETRACHLORODIBENZO-P-DIOXIN (13C6, 99%)	(CAS No)30746-58-8 (Unlabeled)	0.00000347	Carc.Cat.1; R45 Carc.Cat.1; R49 Xn; R20 Xn; R21 Xn; R22
METHYL TRICLOSAN UNLABELED	(CAS No)4640-01-1	0.00000073	Xn; R20/21/22 N; R50/53
PENTACHLOROANISOLE UNLABELED	(CAS No)1825-21-4 (Unlabeled)	0.00000073	Xn; R22 N; R50/53
6-METHOXY-2,2',4,4'-TETRABDE UNLABELED	(CAS No)102739-99-1	0.00000007	T; R23 Xn; R22 Xi; R36/37/38
2,4,6-TRIBROMOANISOLE UNLABELED	(CAS No)607-99-8	0.00000007	R53

# EXTENDED PHENOLIC CALIBRATION SOLUTION CS2 (UNLABELED/<sup>13</sup>C, 99%) ES-5510-CS2

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Name	Product identifier	%	Classification according to Directive 67/548/EEC
2,4,5-TRIBROMOANISOLE UNLABELED	(CAS No)95970-10-8 (Unlabeled)	0.00000007	R53
PENTABROMOANISOLE UNLABELED	(CAS No)1825-26-9	0.00000007	R53
2,4-DIBROMOANISOLE UNLABELED	(CAS No)21702-84-1 (EC no)244-536-5	0.00000007	Xi; R36/37/38
4-METHOXY-2,3,3',4',5-PENTACB UNLABELED	(CAS No)169295-14-1 (Unlabeled) (EC index no)602-039-00-4	0.00000007	Xn; R48/20/21/22 N; R50/53
4-METHOXY-2,2',3,4',5'-HEXACB UNLABELED	(CAS No)169295-19-6 (Unlabeled) (EC index no)602-039-00-4	0.00000007	Xn; R48/20/21/22 N; R50/53
4-METHOXY-2,2',3,4'-TETRABDE UNLABELED	(CAS No)602326-25-0 (Unlabeled)	0.00000007	Xn; R48/21/22 N; R50/53
4-METHOXY-2,2',3,4',5',6-HEPTACB UNLABELED	(CAS No)169295-23-2 (Unlabeled) (EC index no)602-039-00-4	0.00000007	Xn; R48/20/21/22 N; R50/53
3-METHOXY-2,2',4,4'-TETRABDE UNLABELED	(CAS No)602326-28-0 (Unlabeled)	0.00000007	Xn; R20/21/22 N; R50/53
5-METHOXY-2,2',4,4'-TETRABDE UNLABELED	(CAS No)602326-19-2 (Unlabeled)	0.00000007	Xn; R20/21/22 N; R50/53
4'-METHOXY-2,2',4,5'-TETRABDE UNLABELED	(CAS No)476430-88-3 (Unlabeled)	0.00000007	Xn; R20/21/22 Xi; R36/37/38
5'-METHOXY-2,2',4,4',5-PENTABDE UNLABELED	(CAS No)923925-51-3 (Unlabeled)	0.00000007	Carc.Cat.1; R45 Carc.Cat.1; R49 Xn; R20 Xn; R21 Xn; R22 N; R50
6-METHOXY-2,2',4,4',5-PENTABDE UNLABELED	(CAS No)497106-83-9 (Unlabeled)	0.00000007	Carc.Cat.1; R45 Carc.Cat.1; R49 Xn; R20 Xn; R21 Xn; R22 N; R50
DIMETHYL TETRABROMOBISPHENOL A UNLABELED	(CAS No)37853-61-5 (EC no)201-236-9	0.00000004	Xi; R36/37/38 N; R50

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
N-NONANE UNLABELED	(CAS No)111-84-2 (Unlabeled) (EC no)203-913-4	97.40197187	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H336 Asp. Tox. 1, H304
TOLUENE UNLABELED	(CAS No)108-88-3 (EC no)203-625-9 (EC index no)601-021-00-3	2.59755991	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Carc. 2, H351 Repr. 2, H361d STOT SE 3, H336 STOT SE 2, H371 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Acute 1, H400
METHYL TRICLOSAN (RING-13C12, 99%)	(CAS No)4640-01-1 (Unlabeled)	0.00014583	Aquatic Acute 1, H400
PENTACHLOROANISOLE (13C6, 99%)	(CAS No)1825-21-4 (unlabeled)	0.00014513	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
2,4-DIBROMOANISOLE (RING-13C6, 99%)	(CAS No)21702-84-1 (Unlabeled) (EC no)244-536-5	0.00001462	Skin Irrit. 2, H315
2,4,5-TRIBROMOANISOLE (RING-13C6, 99%)	(CAS No)95970-10-8 (Unlabeled)	0.00001444	Aquatic Chronic 4, H413
2,4,6-TRIBROMOANISOLE (RING-13C6, 99%)	(CAS No)607-99-8 (Unlabeled)	0.00001444	Aquatic Chronic 4, H413



# EXTENDED PHENOLIC CALIBRATION SOLUTION CS2 (UNLABELED/<sup>13</sup>C, 99%) ES-5510-CS2

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according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
4-METHOXY-2,2',3,4',5,5'-HEXACB (13C12, 99%)	(CAS No)169295-19-6 (Unlabeled) (EC index no)602-039-00-4	0.00001437	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
4-METHOXY-2,2',3,4',5,5',6-HEPTACB (13C12, 99%)	(CAS No)1629523-2 (Unlabeled) (EC index no)602-039-00-4	0.00001433	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
PENTABROMOANISOLE (13C6, 99%)	(CAS No)1825-26-9 (Unlabeled)	0.00001426	Aquatic Chronic 4, H413
6-METHOXY-2,2',4,4'-TETRABDE (RING-13C12, 99%)	(CAS No)102739-99-1 (Unlabeled)	0.00001425	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Acute Tox. 1 (Inhalation:vapour), H330 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
4-METHOXY-2,3,3',4',5-PENTACB (13C12, 99%)	(CAS No)169295-14-1 (Unlabeled) (EC index no)602-039-00-4	0.00001422	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
6'-METHOXY-2,2',4,4',6-PENTABDE (13C12, 99%)	(CAS No)1391119-70-2 (Unlabeled)	0.0000142	Not classified
2,2',3,3',4,5,5',6,6'-NONACB (PCB-208) (13C12, 99%)	(CAS No)52663-77-1 (Unlabeled)	0.00001387	Not classified
3,3',4,4'-TETRABDE (BDE-77) (13C12, 99%)	(CAS No)93703-48-1 (Unlabeled)	0.0000104	Not classified
2,2',3,4,4',6-HEXABDE (BDE-139) (13C12, 99%)	(CAS No)36483-60-0 (Unlabeled)	0.0000104	Not classified
DIMETHYL TETRABROMOBISPHENOL A (RING-13C12, 99%)	(CAS No)37853-61-5 (Unlabeled) (EC no)201-236-9	0.00000729	Skin Irrit. 2, H315 STOT SE 3, H336 Aquatic Acute 1, H400
1,2,3,4-TETRACHLORODIBENZO-P-DIOXIN (13C6, 99%)	(CAS No)30746-58-8 (Unlabeled)	0.00000347	Carc. 1A, H350 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312
METHYL TRICLOSAN UNLABELED	(CAS No)4640-01-1	0.00000073	Aquatic Acute 1, H400
PENTACHLOROANISOLE UNLABELED	(CAS No)1825-21-4 (Unlabeled)	0.00000073	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
6-METHOXY-2,2',4,4'-TETRABDE UNLABELED	(CAS No)102739-99-1	0.00000007	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Acute Tox. 2 (Inhalation:vapour), H330 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
2,4,6-TRIBROMOANISOLE UNLABELED	(CAS No)607-99-8	0.00000007	Aquatic Chronic 4, H413
2,4,5-TRIBROMOANISOLE UNLABELED	(CAS No)95970-10-8 (Unlabeled)	0.00000007	Aquatic Chronic 4, H413
PENTABROMOANISOLE UNLABELED	(CAS No)1825-26-9	0.00000007	Aquatic Chronic 4, H413
2,4-DIBROMOANISOLE UNLABELED	(CAS No)21702-84-1 (EC no)244-536-5	0.00000007	Skin Irrit. 2, H315
4-METHOXY-2,3,3',4',5-PENTACB UNLABELED	(CAS No)169295-14-1 (Unlabeled) (EC index no)602-039-00-4	0.00000007	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
4-METHOXY-2,2',3,4',5,5'-HEXACB UNLABELED	(CAS No)169295-19-6 (Unlabeled) (EC index no)602-039-00-4	0.00000007	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
4-METHOXY-2,2',3,4'-TETRABDE UNLABELED	(CAS No)602326-25-0 (Unlabeled)	0.00000007	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 STOT SE 2, H371 Aquatic Chronic 1, H410
4-METHOXY-2,2',3,4',5,5',6-HEPTACB UNLABELED	(CAS No)169295-23-2 (Unlabeled) (EC index no)602-039-00-4	0.00000007	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
3-METHOXY-2,2',4,4'-TETRABDE UNLABELED	(CAS No)602326-28-0 (Unlabeled)	0.00000007	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312
5-METHOXY-2,2',4,4'-TETRABDE UNLABELED	(CAS No)602326-19-2 (Unlabeled)	0.00000007	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312
4'-METHOXY-2,2',4,5'-TETRABDE UNLABELED	(CAS No)476430-88-3 (Unlabeled)	0.00000007	Not classified
5'-METHOXY-2,2',4,4',5-PENTABDE UNLABELED	(CAS No)923925-51-3 (Unlabeled)	0.00000007	Carc. 1A, H350 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312 Aquatic Acute 1, H400

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
6-METHOXY-2,2',4,4',5-PENTABDE UNLABELED	(CAS No)497106-83-9 (Unlabeled)	0.00000007	Carc. 1A, H350 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312 Aquatic Acute 1, H400
DIMETHYL TETRABROMOBISPHENOL A UNLABELED	(CAS No)37853-61-5 (EC no)201-236-9	0.00000004	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 1, H400 (M=10)

Name	Product identifier	%	Classification (GHS-US)
N-NONANE UNLABELED	(CAS No)111-84-2 (Unlabeled)	97.40197187	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H336 Asp. Tox. 1, H304
TOLUENE UNLABELED	(CAS No)108-88-3	2.59755991	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Carc. 2, H351 Repr. 2, H361 STOT SE 3, H336 STOT SE 2, H371 Asp. Tox. 1, H304 Aquatic Acute 1, H400

Full text of R-, H- and EUH-phrases: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Assure fresh air breathing. Allow the victim to rest.
- First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

### 4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

- suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

No additional information available

### 5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

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### 6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.  
Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store at room temperature away from light and moisture.  
Incompatible products : Strong bases. strong acids.  
Incompatible materials : Sources of ignition. Direct sunlight.

### 7.3. Specific end use(s)

No additional information available

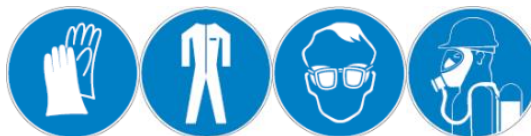
## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

N-NONANE UNLABELED (111-84-2 (Unlabeled))		
Italy - Portugal- USA ACGIH	ACGIH TWA (ppm)	200.0000000000 ppm Central Nervous System impairment.
TOLUENE UNLABELED (108-88-3)		
Italy - Portugal- USA ACGIH	ACGIH TWA (ppm)	20.0000000000 ppm Visual impairment, Female reproductive, Pregnancy loss
USA OSHA	OSHA PEL (TWA) (ppm)	100.0000000000 ppm USA. OSHA - TABLE Z-1 Limits for Air Contaminants 1910.1000
USA OSHA	OSHA PEL (STEL) (ppm)	150.0000000000 ppm USA. OSHA - TABLE Z-1 Limits for Air Contaminants 1910.1000

### 8.2. Exposure controls

Personal protective equipment : Avoid all unnecessary exposure. Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus.



Hand protection : Wear protective gloves.  
Eye protection : Chemical goggles or safety glasses.  
Respiratory protection : Wear approved mask.  
Other information : When using, do not eat, drink or smoke.

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### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid.
Color	: Colorless.
Odor	: characteristic.
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: -53 °C (- 63 °F) - lit
Freezing point	: No data available
Boiling point	: 151 °C (304 °F) - lit
Flash point	: 31.0 °C (87.8 °F) - closed cup
Self ignition temperature	: 205 °C (401 °F)
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: 12.4 hPa (9.3 mmHg) at 37.7 °C (99.9 °F)
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: Water: 0 %
Log Pow	: 5.65
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: 0.87 - 2.9 % (V)

#### 9.2. Other information

No additional information available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No additional information available

#### 10.2. Chemical stability

See storage and expiration date on CoA.

#### 10.3. Possibility of hazardous reactions

Not established.

#### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

#### 10.5. Incompatible materials

strong acids. Strong bases.

#### 10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Not classified

#### 6-METHOXY-2,2',4,4'-TETRABDE UNLABELED (102739-99-1)

ATE (oral)	500.000 mg/kg body weight
ATE (vapors)	0.500 mg/l/4h

#### N-NONANE UNLABELED (111-84-2 (Unlabeled))

LC50 inhalation rat (ppm)	3200 ppm/4h
ATE (dust, mist)	1.500 mg/l/4h

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<b>TOLUENE UNLABELED (108-88-3)</b>	
LD50 oral rat	> 5580 mg/kg
LD50 dermal rabbit	12196 mg/kg
LC50 inhalation rat (mg/l)	12500 - 28800 mg/m <sup>3</sup> 4 h
ATE (dermal)	12196.000 mg/kg body weight
ATE (gases)	4500.000 ppmV/4h
ATE (vapors)	12.500 mg/l/4h
ATE (dust, mist)	1.500 mg/l/4h

<b>6-METHOXY-2,2',4,4'-TETRABDE (RING-13C12, 99%) (102739-99-1 (Unlabeled))</b>	
ATE (oral)	500.000 mg/kg body weight
ATE (vapors)	0.050 mg/l/4h

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Suspected of causing cancer.
Reproductive toxicity	: Suspected of damaging the unborn child.
Specific target organ toxicity (single exposure)	: May cause drowsiness or dizziness.
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

### 12.1. Toxicity

<b>DIMETHYL TETRABROMOBISPHENOL A UNLABELED (37853-61-5)</b>	
LC50 fish 1	0.06 mg/l Pimephales promelas (fathead minnow) - 96 h
EC50 Daphnia 1	7.9 mg/l Daphnia magna (Water flea) - 48 h

<b>PENTACHLOROANISOLE (13C6, 99%) (1825-21-4 (unlabeled))</b>	
LC50 fish 1	0.65 mg/l Pimephales promelas (fathead minnow) - 96 h
EC50 Daphnia 1	0.027 mg/l Daphnia magna (Water flea) - 48 h

<b>TOLUENE UNLABELED (108-88-3)</b>	
LC50 fish 1	74 - 340 mg/l Lepomis macrochirus (Bluegill) - 96h
LC50 other aquatic organisms 1	10 mg/l Pseudokirchneriella subcapitata (Green algae) - 24 h
EC50 Daphnia 1	8 mg/l Daphnia magna (Water flea) - 24h
LC50 fish 2	7.63 mg/l Oncorhynchus mykiss (Rainbow trout) - 96 h
EC50 Daphnia 2	6 mg/l Daphnia magna (Water flea) - Immobilization - 48 h
ErC50 (algae)	245 mg/l Chlorella vulgaris (Fresh water algae) - 24 h
LOEC (chronic)	8.04 mg/l Pimephales promelas (Fathead minnow) - 7 d
NOEC (chronic)	5.44 mg/l Pimephales promelas (fathead minnow) - 7 d

<b>PENTACHLOROANISOLE UNLABELED (1825-21-4 (Unlabeled))</b>	
LC50 fish 1	0.65 mg/l Pimephales promelas (fathead minnow) - 96 h
EC50 Daphnia 1	0.027 mg/l Daphnia magna (Water flea) - 48 h

<b>DIMETHYL TETRABROMOBISPHENOL A (RING-13C12, 99%) (37853-61-5 (Unlabeled))</b>	
LC50 fish 1	0.06 mg/l Pimephales promelas (fathead minnow) - 96 h
EC50 Daphnia 1	7.9 mg/l Daphnia magna (Water flea) - 48 h

### 12.2. Persistence and degradability

<b>EXTENDED PHENOLIC CALIBRATION SOLUTION CS2 (UNLABELED/<sup>13</sup>C, 99%)</b>	
Persistence and degradability	Not established.

<b>6-METHOXY-2,2',4,4'-TETRABDE UNLABELED (102739-99-1)</b>	
Persistence and degradability	Not available.

# EXTENDED PHENOLIC CALIBRATION SOLUTION CS2 (UNLABELED/<sup>13</sup>C, 99%) ES-5510-CS2

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<b>DIMETHYL TETRABROMOBISPHENOL A UNLABELED (37853-61-5)</b>	
Persistence and degradability	Not available.
<b>METHYL TRICLOSAN (RING-<sup>13</sup>C<sub>12</sub>, 99%) (4640-01-1 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>METHYL TRICLOSAN UNLABELED (4640-01-1)</b>	
Persistence and degradability	Not available.
<b>PENTACHLOROANISOLE (<sup>13</sup>C<sub>6</sub>, 99%) (1825-21-4 (unlabeled))</b>	
Persistence and degradability	Not available.
<b>N-NONANE UNLABELED (111-84-2 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>PENTACHLOROANISOLE UNLABELED (1825-21-4 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>2,4,6-TRIBROMOANISOLE UNLABELED (607-99-8)</b>	
Persistence and degradability	Not available.
<b>2,4,5-TRIBROMOANISOLE UNLABELED (95970-10-8 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>2,4,6-TRIBROMOANISOLE (RING-<sup>13</sup>C<sub>6</sub>, 99%) (607-99-8 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>PENTABROMOANISOLE (<sup>13</sup>C<sub>6</sub>, 99%) (1825-26-9 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>PENTABROMOANISOLE UNLABELED (1825-26-9)</b>	
Persistence and degradability	Not available.
<b>2,4-DIBROMOANISOLE (RING-<sup>13</sup>C<sub>6</sub>, 99%) (21702-84-1 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>2,4-DIBROMOANISOLE UNLABELED (21702-84-1)</b>	
Persistence and degradability	Not available.
<b>6-METHOXY-2,2',4,4'-TETRABDE (RING-<sup>13</sup>C<sub>12</sub>, 99%) (102739-99-1 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>DIMETHYL TETRABROMOBISPHENOL A (RING-<sup>13</sup>C<sub>12</sub>, 99%) (37853-61-5 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,3,3',4',5-PENTACB UNLABELED (169295-14-1 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,3,3',4',5-PENTACB (<sup>13</sup>C<sub>12</sub>, 99%) (169295-14-1 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,2',3,4',5,5'-HEXACB UNLABELED (169295-19-6 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,2',3,4',5,5'-HEXACB (<sup>13</sup>C<sub>12</sub>, 99%) (169295-19-6 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,2',3,4'-TETRABDE UNLABELED (602326-25-0 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,2',3,4',5,5',6-HEPTACB UNLABELED (169295-23-2 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,2',3,4',5,5',6-HEPTACB (<sup>13</sup>C<sub>12</sub>, 99%) (1629523-2 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>3-METHOXY-2,2',4,4'-TETRABDE UNLABELED (602326-28-0 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>5-METHOXY-2,2',4,4'-TETRABDE UNLABELED (602326-19-2 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4'-METHOXY-2,2',4,5'-TETRABDE UNLABELED (476430-88-3 (Unlabeled))</b>	

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Persistence and degradability	Not available.
<b>5'-METHOXY-2,2',4,4',5-PENTABDE UNLABELED (923925-51-3 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>6-METHOXY-2,2',4,4',5-PENTABDE UNLABELED (497106-83-9 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>6'-METHOXY-2,2',4,4',6-PENTABDE (13C12, 99%) (1391119-70-2 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>1,2,3,4-TETRACHLORODIBENZO-P-DIOXIN (13C6, 99%) (30746-58-8 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>3,3',4,4'-TETRABDE (BDE-77) (13C12, 99%) (93703-48-1 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>2,2',3,4,4',6-HEXABDE (BDE-139) (13C12, 99%) (36483-60-0 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>2,4,5-TRIBROMOANISOLE (RING-13C6, 99%) (95970-10-8 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>12.3. Bioaccumulative potential</b>	
<b>EXTENDED PHENOLIC CALIBRATION SOLUTION CS2 (UNLABELED/13C, 99%)</b>	
Log Pow	5.65
Bioaccumulative potential	Not established.
<b>6-METHOXY-2,2',4,4'-TETRABDE UNLABELED (102739-99-1)</b>	
Bioaccumulative potential	Not available.
<b>DIMETHYL TETRABROMOBISPHENOL A UNLABELED (37853-61-5)</b>	
Bioaccumulative potential	Not available.
<b>METHYL TRICLOSAN (RING-13C12, 99%) (4640-01-1 (Unlabeled))</b>	
Log Pow	5.269
Bioaccumulative potential	Not available.
<b>METHYL TRICLOSAN UNLABELED (4640-01-1)</b>	
Log Pow	5.269
Bioaccumulative potential	Not available.
<b>PENTACHLOROANISOLE (13C6, 99%) (1825-21-4 (unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>N-NONANE UNLABELED (111-84-2 (Unlabeled))</b>	
Log Pow	5.65
Bioaccumulative potential	Indication of bioaccumulation.
<b>TOLUENE UNLABELED (108-88-3)</b>	
Bioaccumulative potential	Not available.
<b>PENTACHLOROANISOLE UNLABELED (1825-21-4 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>2,4-DIBROMOANISOLE (RING-13C6, 99%) (21702-84-1 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>2,4-DIBROMOANISOLE UNLABELED (21702-84-1)</b>	
Bioaccumulative potential	Not available.
<b>6-METHOXY-2,2',4,4'-TETRABDE (RING-13C12, 99%) (102739-99-1 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>DIMETHYL TETRABROMOBISPHENOL A (RING-13C12, 99%) (37853-61-5 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4-METHOXY-2,3,3',4',5-PENTACB UNLABELED (169295-14-1 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4-METHOXY-2,3,3',4',5-PENTACB (13C12, 99%) (169295-14-1 (Unlabeled))</b>	
Bioaccumulative potential	Not available.

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<b>4-METHOXY-2,2',3,4',5,5'-HEXACB UNLABELED (169295-19-6 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4-METHOXY-2,2',3,4',5,5'-HEXACB (13C12, 99%) (169295-19-6 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4-METHOXY-2,2',3,4'-TETRABDE UNLABELED (602326-25-0 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4-METHOXY-2,2',3,4',5,5',6-HEPTACB UNLABELED (169295-23-2 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4-METHOXY-2,2',3,4',5,5',6-HEPTACB (13C12, 99%) (1629523-2 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>3-METHOXY-2,2',4,4'-TETRABDE UNLABELED (602326-28-0 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>5-METHOXY-2,2',4,4'-TETRABDE UNLABELED (602326-19-2 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4'-METHOXY-2,2',4,5'-TETRABDE UNLABELED (476430-88-3 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>5'-METHOXY-2,2',4,4',5-PENTABDE UNLABELED (923925-51-3 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>6-METHOXY-2,2',4,4',5-PENTABDE UNLABELED (497106-83-9 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>6'-METHOXY-2,2',4,4',6-PENTABDE (13C12, 99%) (1391119-70-2 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>1,2,3,4-TETRACHLORODIBENZO-P-DIOXIN (13C6, 99%) (30746-58-8 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>3,3',4,4'-TETRABDE (BDE-77) (13C12, 99%) (93703-48-1 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>2,2',3,4,4',6-HEXABDE (BDE-139) (13C12, 99%) (36483-60-0 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>12.4. Mobility in soil</b>	
<b>6-METHOXY-2,2',4,4'-TETRABDE UNLABELED (102739-99-1)</b>	
Ecology - soil	Not available.
<b>DIMETHYL TETRABROMOBISPHENOL A UNLABELED (37853-61-5)</b>	
Ecology - soil	Not available.
<b>METHYL TRICLOSAN (RING-13C12, 99%) (4640-01-1 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>METHYL TRICLOSAN UNLABELED (4640-01-1)</b>	
Ecology - soil	Not available.
<b>PENTACHLOROANISOLE (13C6, 99%) (1825-21-4 (unlabeled))</b>	
Ecology - soil	Not available.
<b>N-NONANE UNLABELED (111-84-2 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>TOLUENE UNLABELED (108-88-3)</b>	
Ecology - soil	Not available.
<b>PENTACHLOROANISOLE UNLABELED (1825-21-4 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>2,4,6-TRIBROMOANISOLE UNLABELED (607-99-8)</b>	
Ecology - soil	Not available.
<b>2,4,5-TRIBROMOANISOLE UNLABELED (95970-10-8 (Unlabeled))</b>	
Ecology - soil	Not available.



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<b>2,4,6-TRIBROMOANISOLE (RING-13C6, 99%) (607-99-8 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>PENTABROMOANISOLE (13C6, 99%) (1825-26-9 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>PENTABROMOANISOLE UNLABELED (1825-26-9)</b>	
Ecology - soil	Not available.
<b>2,4-DIBROMOANISOLE (RING-13C6, 99%) (21702-84-1 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>2,4-DIBROMOANISOLE UNLABELED (21702-84-1)</b>	
Ecology - soil	Not available.
<b>6-METHOXY-2,2',4,4'-TETRABDE (RING-13C12, 99%) (102739-99-1 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>DIMETHYL TETRABROMOBISPHENOL A (RING-13C12, 99%) (37853-61-5 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,3,3',4',5-PENTACB UNLABELED (169295-14-1 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,3,3',4',5-PENTACB (13C12, 99%) (169295-14-1 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,2',3,4',5,5'-HEXACB UNLABELED (169295-19-6 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,2',3,4',5,5'-HEXACB (13C12, 99%) (169295-19-6 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,2',3,4'-TETRABDE UNLABELED (602326-25-0 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,2',3,4',5,5',6-HEPTACB UNLABELED (169295-23-2 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,2',3,4',5,5',6-HEPTACB (13C12, 99%) (1629523-2 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>3-METHOXY-2,2',4,4'-TETRABDE UNLABELED (602326-28-0 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>5-METHOXY-2,2',4,4'-TETRABDE UNLABELED (602326-19-2 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4'-METHOXY-2,2',4,5'-TETRABDE UNLABELED (476430-88-3 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>5'-METHOXY-2,2',4,4',5-PENTABDE UNLABELED (923925-51-3 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>6-METHOXY-2,2',4,4',5-PENTABDE UNLABELED (497106-83-9 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>6'-METHOXY-2,2',4,4',6-PENTABDE (13C12, 99%) (1391119-70-2 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>1,2,3,4-TETRACHLORODIBENZO-P-DIOXIN (13C6, 99%) (30746-58-8 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>3,3',4,4'-TETRABDE (BDE-77) (13C12, 99%) (93703-48-1 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>2,2',3,4,4',6-HEXABDE (BDE-139) (13C12, 99%) (36483-60-0 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>2,4,5-TRIBROMOANISOLE (RING-13C6, 99%) (95970-10-8 (Unlabeled))</b>	
Ecology - soil	Not available.

# EXTENDED PHENOLIC CALIBRATION SOLUTION CS2 (UNLABELED/<sup>13</sup>C, 99%) ES-5510-CS2

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### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

Other information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Regional legislation (waste) : Waste materials should be disposed of under conditions which meet Federal, State, and Local environmental control regulations.

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

### 14.1. UN number

UN-No.(DOT) : UN1920

### 14.2. UN proper shipping name

DOT Proper Shipping Name : Nonanes

Department of Transportation (DOT) Hazard Classes : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

Hazard labels (DOT) : 3 - Flammable liquid



Packing group (DOT) : III - Minor Danger

DOT Special Provisions (49 CFR 172.102) : B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then the bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has a flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable.

IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).

T2 - 1.5 178.274(d)(2) Normal..... 178.275(d)(3)

TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling =  $97 / 1 + a (tr - tf)$  Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.

DOT Packaging Exceptions (49 CFR 173.xxx) : 150

DOT Packaging Non Bulk (49 CFR 173.xxx) : 203

DOT Packaging Bulk (49 CFR 173.xxx) : 242

Marine pollutant : No

### 14.3. Additional information

Other information : No supplementary information available.

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### Overland transport

Packing group (ADR) : III  
Class (ADR) : 3 - Flammable liquid  
Hazard identification number (Kemler No.) : 30  
Classification code (ADR) : F1  
Danger labels (ADR) : 3 - Flammable liquids



Orange plates :

Tunnel restriction code : D/E  
Limited quantities (ADR) : 5L  
EAC : 3Y  
Excepted quantities (ADR) : E1

### Transport by sea

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.  
MFAG-No : 128

### Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 60 L  
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 220 L

### 14.4. Environmental hazards

Other information : No supplementary information available.

### 14.5. Special precautions for user

### 14.6. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### N-NONANE UNLABELED (111-84-2 (Unlabeled))

SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard
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#### TOLUENE UNLABELED (108-88-3)

Listed on SARA Section 313 (Specific toxic chemical listings)	
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard

### 15.2. International regulations

#### CANADA

#### EXTENDED PHENOLIC CALIBRATION SOLUTION CS2 (UNLABELED/13C, 99%)

Listed on the Canadian DSL (Domestic Substances List) inventory.

#### TOLUENE UNLABELED (108-88-3)

Listed on the Canadian DSL (Domestic Substances List) inventory.

# EXTENDED PHENOLIC CALIBRATION SOLUTION CS2 (UNLABELED/<sup>13</sup>C, 99%) ES-5510-CS2

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### 15.2.1. National regulations

No additional information available

### 15.3. US State regulations

#### N-NONANE UNLABELED (111-84-2 (Unlabeled))

U.S. - Massachusetts - Right To Know List  
U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

#### TOLUENE UNLABELED (108-88-3)

U.S. - Massachusetts - Right To Know List  
U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
WARNING! This product contains a chemical known by the state of California to cause birth defects or other reproductive harm.

## SECTION 16: Other information

Other information : None.

# EXTENDED PHENOLIC CALIBRATION SOLUTION CS2 (UNLABELED/<sup>13</sup>C, 99%) ES-5510-CS2

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Full text of R-, H- and EUH-phrases::

Acute Tox. 1 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 1
Acute Tox. 2 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 2
Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Aquatic Chronic 4	Hazardous to the aquatic environment - Chronic Hazard Category 4
Asp. Tox. 1	Aspiration hazard Category 1
Carc. 1A	Carcinogenicity Category 1A
Carc. 2	Carcinogenicity Category 2
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Flam. Liq. 2	Flammable liquids Category 2
Flam. Liq. 3	Flammable liquids Category 3
Repr. 2	Reproductive toxicity Category 2
Skin Irrit. 2	skin corrosion/irritation Category 2
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
STOT SE 2	Specific target organ toxicity (single exposure) Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H225	Highly flammable liquid and vapor
H226	Flammable liquid and vapor
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H312	Harmful in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H330	Fatal if inhaled
H332	Harmful if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H350	May cause cancer
H351	Suspected of causing cancer
H361d	Suspected of damaging the unborn child
H371	May cause damage to organs
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H413	May cause long lasting harmful effects to aquatic life
R10	Flammable
R11	Highly flammable
R20	Harmful by inhalation
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed
R21	Harmful in contact with skin
R22	Harmful if swallowed
R23	Toxic by inhalation
R36/37/38	Irritating to eyes, respiratory system and skin
R36/38	Irritating to eyes and skin
R40	Limited evidence of a carcinogenic effect
R45	May cause cancer
R48/20/21/22	Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed
R48/21/22	Harmful: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed
R49	May cause cancer by inhalation
R50	Very toxic to aquatic organisms
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R51	Toxic to aquatic organisms
R53	May cause long-term adverse effects in the aquatic environment
R62	Possible risk of impaired fertility
R63	Possible risk of harm to the unborn child

# EXTENDED PHENOLIC CALIBRATION SOLUTION CS2 (UNLABELED/<sup>13</sup>C, 99%) ES-5510-CS2

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R65	Harmful: may cause lung damage if swallowed
R67	Vapors may cause drowsiness and dizziness
F	Highly flammable
N	Dangerous for the environment
T	Toxic
Xi	Irritant
Xn	Harmful

CIL Multi-Solvent Mixture SDS

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*



# EXTENDED PHENOLIC CALIBRATION SOLUTION CS3 (UNLABELED/<sup>13</sup>C, 99%)

## Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 25/06/2014

Revision date:

:

Version: 1.0

**ES-5510-CS3**

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

Product form : Mixtures  
Product name. : EXTENDED PHENOLIC CALIBRATION SOLUTION CS3 (UNLABELED/<sup>13</sup>C, 99%)  
Product code : ES-5510-CS3

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### 1.2.1. Relevant identified uses

Industrial/Professional use spec : For professional use only.  
Industrial.

#### 1.2.2. Uses advised against

No additional information available

### 1.3. Details of the supplier of the safety data sheet

Cambridge Isotope Laboratories, Inc.  
50 Frontage Road  
Andover, MA 01810  
USA

USA: 1-800-322-1174 Int: 1-978-749-8000  
[cilsales@isotope.com](mailto:cilsales@isotope.com) [www.isotope.com](http://www.isotope.com)

### Emergency telephone number

Emergency numbers:

Chemtrec: 1-800-424-9300 (24 hours)  
International: 1-202-483-7616 (24 hours)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 2	H225
Skin Irrit. 2	H315
Eye Irrit. 2	H319
Carc. 2	H351
STOT SE 3	H336
Repr. 2	H361d

Full text of H-phrases: see section 16

#### Classification according to Directive 67/548/EEC or 1999/45/EC

Carc.Cat.3; R40  
F; R11  
Xn; R20  
Xn; R65

Full text of R-phrases: see section 16

#### Classification (GHS-US)

Flam. Liq. 2	H225
Skin Irrit. 2	H315
Eye Irrit. 2A	H319
Carc. 2	H351
Repr. 2	H361
STOT SE 3	H336
Aquatic Acute 2	H401

#### Adverse physicochemical, human health and environmental effects

No additional information available

# EXTENDED PHENOLIC CALIBRATION SOLUTION CS3 (UNLABELED/13C, 99%) ES-5510-CS3

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according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 2.2. Label elements

#### Labeling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



Signal word (CLP) :

Danger

Hazardous ingredients :

TOLUENE UNLABELED

Hazard statements (CLP) :

H225 - Highly flammable liquid and vapor  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H336 - May cause drowsiness or dizziness  
H351 - Suspected of causing cancer  
H361 - Suspected of damaging the unborn child

Precautionary statements (CLP) :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
P233 - Keep container tightly closed  
P240 - Ground/bond container and receiving equipment  
P241 - Use explosion-proof electrical, lighting, ventilating equipment  
P261 - Avoid breathing dust, fume, gas, mist, spray, vapors  
P264 - Wash Both hands thoroughly after handling  
P271 - Use only outdoors or in a well-ventilated area  
P280 - Wear protective clothing, protective gloves

#### GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H225 - Highly flammable liquid and vapor  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H336 - May cause drowsiness or dizziness  
H351 - Suspected of causing cancer (Dermal, Inhalation, oral)  
H361 - Suspected of damaging fertility or the unborn child (Dermal, oral, Inhalation)  
H401 - Toxic to aquatic life

Precautionary statements (GHS-US) :

P201 - Obtain special instructions before use  
P202 - Do not handle until all safety precautions have been read and understood  
P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking  
P233 - Keep container tightly closed  
P240 - Ground/bond container and receiving equipment  
P241 - Use explosion-proof electrical, lighting, ventilating equipment  
P242 - Use only non-sparking tools  
P243 - Take precautionary measures against static discharge  
P261 - Avoid breathing dust, fume, gas, mist, spray, vapors  
P264 - Wash Both hands thoroughly after handling  
P271 - Use only outdoors or in a well-ventilated area  
P273 - Avoid release to the environment  
P280 - Wear protective clothing, protective gloves  
P302+P352 - IF ON SKIN: Wash with plenty of soap and water  
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P308+P313 - IF exposed or concerned: Get medical advice/attention  
P312 - Call a POISON CENTER/doctor/physician if you feel unwell  
P321 - Specific treatment (see Hazard pictograms (CLP) on this label)  
P332+P313 - If skin irritation occurs: Get medical advice/attention



# EXTENDED PHENOLIC CALIBRATION SOLUTION CS3 (UNLABELED/13C, 99%) ES-5510-CS3

## Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

P337+P313 - If eye irritation persists: Get medical advice/attention  
P362 - Take off contaminated clothing and wash before reuse  
P370+P378 - In case of fire: Use Carbon dioxide., Dry chemical., Alcohol resistant foam., Water spray for extinction  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed  
P403+P235 - Store in a well-ventilated place. Keep cool  
P405 - Store locked up  
P501 - Dispose of contents/container to Comply with applicable regulations.

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

# EXTENDED PHENOLIC CALIBRATION SOLUTION CS3 (UNLABELED/<sup>13</sup>C, 99%) ES-5510-CS3

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according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 3.2. Mixtures

Name	Product identifier	%	Classification according to Directive 67/548/EEC
N-NONANE UNLABELED	(CAS No)111-84-2 (Unlabeled) (EC no)203-913-4	97.36650196	R10 Xn; R20 Xn; R65 R67
TOLUENE UNLABELED	(CAS No)108-88-3 (EC no)203-625-9 (EC index no)601-021-00-3	2.63301989	Repr.Cat.3; R62 Repr.Cat.3; R63 F; R11 Xi; R36/38 Carc.Cat.3; R40 N; R51 Xn; R20 R67 Xn; R65
METHYL TRICLOSAN (RING-13C12, 99%)	(CAS No)4640-01-1 (Unlabeled)	0.00014582	Xn; R20/21/22 N; R50/53
PENTACHLOROANISOLE (13C6, 99%)	(CAS No)1825-21-4 (unlabeled)	0.00014511	Xn; R22 N; R50/53
2,4-DIBROMOANISOLE (RING-13C6, 99%)	(CAS No)21702-84-1 (Unlabeled) (EC no)244-536-5	0.00001462	Xi; R36/37/38
2,4,5-TRIBROMOANISOLE (RING-13C6, 99%)	(CAS No)95970-10-8 (Unlabeled)	0.00001444	R53
2,4,6-TRIBROMOANISOLE (RING-13C6, 99%)	(CAS No)607-99-8 (Unlabeled)	0.00001444	R53
4-METHOXY-2,2',3,4',5,5'-HEXACB (13C12, 99%)	(CAS No)169295-19-6 (Unlabeled) (EC index no)602-039-00-4	0.00001437	Xn; R48/20/21/22 N; R50/53
4-METHOXY-2,2',3,4',5,5',6-HEPTACB (13C12, 99%)	(CAS No)1629523-2 (Unlabeled) (EC index no)602-039-00-4	0.00001433	Xn; R48/20/21/22 N; R50/53
PENTABROMOANISOLE (13C6, 99%)	(CAS No)1825-26-9 (Unlabeled)	0.00001426	R53
6-METHOXY-2,2',4,4'-TETRABDE (RING-13C12, 99%)	(CAS No)102739-99-1 (Unlabeled)	0.00001424	T; R23 Xn; R22 Xi; R36/37/38
4-METHOXY-2,3,3',4',5-PENTACB (13C12, 99%)	(CAS No)169295-14-1 (Unlabeled) (EC index no)602-039-00-4	0.00001422	Xn; R48/20/21/22 N; R50/53
6'-METHOXY-2,2',4,4',6-PENTABDE (13C12, 99%)	(CAS No)1391119-70-2 (Unlabeled)	0.0000142	Xn; R20/21/22 Xi; R36/37/38
2,2',3,3',4,5,5',6,6'-NONACB (PCB-208) (13C12, 99%)	(CAS No)52663-77-1 (Unlabeled)	0.00001386	Not classified
3,3',4,4'-TETRABDE (BDE-77) (13C12, 99%)	(CAS No)93703-48-1 (Unlabeled)	0.0000104	Xn; R20/21/22 Xi; R36/37/38
2,2',3,4,4',6-HEXABDE (BDE-139) (13C12, 99%)	(CAS No)36483-60-0 (Unlabeled)	0.0000104	Xn; R20/21/22 Xi; R36/37/38
DIMETHYL TETRABROMOBISPHENOL A (RING-13C12, 99%)	(CAS No)37853-61-5 (Unlabeled) (EC no)201-236-9	0.00000729	Xi; R36/37/38 N; R50
PENTACHLOROANISOLE UNLABELED	(CAS No)1825-21-4 (Unlabeled)	0.00000365	Xn; R22 N; R50/53
METHYL TRICLOSAN UNLABELED	(CAS No)4640-01-1	0.00000364	Xn; R20/21/22 N; R50/53
1,2,3,4-TETRACHLORODIBENZO-P-DIOXIN (13C6, 99%)	(CAS No)30746-58-8 (Unlabeled)	0.00000347	Carc.Cat.1; R45 Carc.Cat.1; R49 Xn; R20 Xn; R21 Xn; R22
2,4-DIBROMOANISOLE UNLABELED	(CAS No)21702-84-1 (EC no)244-536-5	0.00000037	Xi; R36/37/38
6-METHOXY-2,2',4,4'-TETRABDE UNLABELED	(CAS No)102739-99-1	0.00000036	T; R23 Xn; R22 Xi; R36/37/38

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Name	Product identifier	%	Classification according to Directive 67/548/EEC
2,4,6-TRIBROMOANISOLE UNLABELED	(CAS No)607-99-8	0.00000036	R53
2,4,5-TRIBROMOANISOLE UNLABELED	(CAS No)95970-10-8 (Unlabeled)	0.00000036	R53
PENTABROMOANISOLE UNLABELED	(CAS No)1825-26-9	0.00000036	R53
4-METHOXY-2,3,3',4',5-PENTACB UNLABELED	(CAS No)169295-14-1 (Unlabeled) (EC index no)602-039-00-4	0.00000036	Xn; R48/20/21/22 N; R50/53
4-METHOXY-2,2',3,4',5,5'-HEXACB UNLABELED	(CAS No)169295-19-6 (Unlabeled) (EC index no)602-039-00-4	0.00000036	Xn; R48/20/21/22 N; R50/53
4-METHOXY-2,2',3,4'-TETRABDE UNLABELED	(CAS No)602326-25-0 (Unlabeled)	0.00000036	Xn; R48/21/22 N; R50/53
4-METHOXY-2,2',3,4',5,5',6-HEPTACB UNLABELED	(CAS No)169295-23-2 (Unlabeled) (EC index no)602-039-00-4	0.00000036	Xn; R48/20/21/22 N; R50/53
3-METHOXY-2,2',4,4'-TETRABDE UNLABELED	(CAS No)602326-28-0 (Unlabeled)	0.00000036	Xn; R20/21/22 N; R50/53
5-METHOXY-2,2',4,4'-TETRABDE UNLABELED	(CAS No)602326-19-2 (Unlabeled)	0.00000036	Xn; R20/21/22 N; R50/53
4'-METHOXY-2,2',4,5'-TETRABDE UNLABELED	(CAS No)476430-88-3 (Unlabeled)	0.00000036	Xn; R20/21/22 Xi; R36/37/38
5'-METHOXY-2,2',4,4',5-PENTABDE UNLABELED	(CAS No)923925-51-3 (Unlabeled)	0.00000036	Carc.Cat.1; R45 Carc.Cat.1; R49 Xn; R20 Xn; R21 Xn; R22 N; R50
6-METHOXY-2,2',4,4',5-PENTABDE UNLABELED	(CAS No)497106-83-9 (Unlabeled)	0.00000036	Carc.Cat.1; R45 Carc.Cat.1; R49 Xn; R20 Xn; R21 Xn; R22 N; R50
DIMETHYL TETRABROMOBISPHENOL A UNLABELED	(CAS No)37853-61-5 (EC no)201-236-9	0.00000018	Xi; R36/37/38 N; R50

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
N-NONANE UNLABELED	(CAS No)111-84-2 (Unlabeled) (EC no)203-913-4	97.36650196	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H336 Asp. Tox. 1, H304
TOLUENE UNLABELED	(CAS No)108-88-3 (EC no)203-625-9 (EC index no)601-021-00-3	2.63301989	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Carc. 2, H351 Repr. 2, H361d STOT SE 3, H336 STOT SE 2, H371 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Acute 1, H400
METHYL TRICLOSAN (RING-13C12, 99%)	(CAS No)4640-01-1 (Unlabeled)	0.00014582	Aquatic Acute 1, H400
PENTACHLOROANISOLE (13C6, 99%)	(CAS No)1825-21-4 (unlabeled)	0.00014511	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
2,4-DIBROMOANISOLE (RING-13C6, 99%)	(CAS No)21702-84-1 (Unlabeled) (EC no)244-536-5	0.00001462	Skin Irrit. 2, H315
2,4,5-TRIBROMOANISOLE (RING-13C6, 99%)	(CAS No)95970-10-8 (Unlabeled)	0.00001444	Aquatic Chronic 4, H413
2,4,6-TRIBROMOANISOLE (RING-13C6, 99%)	(CAS No)607-99-8 (Unlabeled)	0.00001444	Aquatic Chronic 4, H413

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
4-METHOXY-2,2',3,4',5,5'-HEXACB (13C12, 99%)	(CAS No)169295-19-6 (Unlabeled) (EC index no)602-039-00-4	0.00001437	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
4-METHOXY-2,2',3,4',5,5',6-HEPTACB (13C12, 99%)	(CAS No)1629523-2 (Unlabeled) (EC index no)602-039-00-4	0.00001433	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
PENTABROMOANISOLE (13C6, 99%)	(CAS No)1825-26-9 (Unlabeled)	0.00001426	Aquatic Chronic 4, H413
6-METHOXY-2,2',4,4'-TETRABDE (RING-13C12, 99%)	(CAS No)102739-99-1 (Unlabeled)	0.00001424	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Acute Tox. 1 (Inhalation:vapour), H330 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
4-METHOXY-2,3,3',4',5-PENTACB (13C12, 99%)	(CAS No)169295-14-1 (Unlabeled) (EC index no)602-039-00-4	0.00001422	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
6'-METHOXY-2,2',4,4',6-PENTABDE (13C12, 99%)	(CAS No)1391119-70-2 (Unlabeled)	0.0000142	Not classified
2,2',3,3',4,5,5',6,6'-NONACB (PCB-208) (13C12, 99%)	(CAS No)52663-77-1 (Unlabeled)	0.00001386	Not classified
3,3',4,4'-TETRABDE (BDE-77) (13C12, 99%)	(CAS No)93703-48-1 (Unlabeled)	0.0000104	Not classified
2,2',3,4,4',6-HEXABDE (BDE-139) (13C12, 99%)	(CAS No)36483-60-0 (Unlabeled)	0.0000104	Not classified
DIMETHYL TETRABROMOBISPHENOL A (RING-13C12, 99%)	(CAS No)37853-61-5 (Unlabeled) (EC no)201-236-9	0.00000729	Skin Irrit. 2, H315 STOT SE 3, H336 Aquatic Acute 1, H400
PENTACHLOROANISOLE UNLABELED	(CAS No)1825-21-4 (Unlabeled)	0.00000365	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
METHYL TRICLOSAN UNLABELED	(CAS No)4640-01-1	0.00000364	Aquatic Acute 1, H400
1,2,3,4-TETRACHLORODIBENZO-P-DIOXIN (13C6, 99%)	(CAS No)30746-58-8 (Unlabeled)	0.00000347	Carc. 1A, H350 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312
2,4-DIBROMOANISOLE UNLABELED	(CAS No)21702-84-1 (EC no)244-536-5	0.00000037	Skin Irrit. 2, H315
6-METHOXY-2,2',4,4'-TETRABDE UNLABELED	(CAS No)102739-99-1	0.00000036	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Acute Tox. 2 (Inhalation:vapour), H330 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
2,4,6-TRIBROMOANISOLE UNLABELED	(CAS No)607-99-8	0.00000036	Aquatic Chronic 4, H413
2,4,5-TRIBROMOANISOLE UNLABELED	(CAS No)95970-10-8 (Unlabeled)	0.00000036	Aquatic Chronic 4, H413
PENTABROMOANISOLE UNLABELED	(CAS No)1825-26-9	0.00000036	Aquatic Chronic 4, H413
4-METHOXY-2,3,3',4',5-PENTACB UNLABELED	(CAS No)169295-14-1 (Unlabeled) (EC index no)602-039-00-4	0.00000036	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
4-METHOXY-2,2',3,4',5,5'-HEXACB UNLABELED	(CAS No)169295-19-6 (Unlabeled) (EC index no)602-039-00-4	0.00000036	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
4-METHOXY-2,2',3,4'-TETRABDE UNLABELED	(CAS No)602326-25-0 (Unlabeled)	0.00000036	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 STOT SE 2, H371 Aquatic Chronic 1, H410
4-METHOXY-2,2',3,4',5,5',6-HEPTACB UNLABELED	(CAS No)169295-23-2 (Unlabeled) (EC index no)602-039-00-4	0.00000036	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
3-METHOXY-2,2',4,4'-TETRABDE UNLABELED	(CAS No)602326-28-0 (Unlabeled)	0.00000036	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312
5-METHOXY-2,2',4,4'-TETRABDE UNLABELED	(CAS No)602326-19-2 (Unlabeled)	0.00000036	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312
4'-METHOXY-2,2',4,5'-TETRABDE UNLABELED	(CAS No)476430-88-3 (Unlabeled)	0.00000036	Not classified
5'-METHOXY-2,2',4,4',5-PENTABDE UNLABELED	(CAS No)923925-51-3 (Unlabeled)	0.00000036	Carc. 1A, H350 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312 Aquatic Acute 1, H400

# EXTENDED PHENOLIC CALIBRATION SOLUTION CS3 (UNLABELED/<sup>13</sup>C, 99%) ES-5510-CS3

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
6-METHOXY-2,2',4,4',5-PENTABDE UNLABELED	(CAS No)497106-83-9 (Unlabeled)	0.00000036	Carc. 1A, H350 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312 Aquatic Acute 1, H400
DIMETHYL TETRABROMOBISPHENOL A UNLABELED	(CAS No)37853-61-5 (EC no)201-236-9	0.00000018	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 1, H400 (M=10)

Name	Product identifier	%	Classification (GHS-US)
N-NONANE UNLABELED	(CAS No)111-84-2 (Unlabeled)	97.36650196	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H336 Asp. Tox. 1, H304
TOLUENE UNLABELED	(CAS No)108-88-3	2.63301989	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Carc. 2, H351 Repr. 2, H361 STOT SE 3, H336 STOT SE 2, H371 Asp. Tox. 1, H304 Aquatic Acute 1, H400

Full text of R-, H- and EUH-phrases: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Assure fresh air breathing. Allow the victim to rest.
- First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

### 4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

- suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

No additional information available

### 5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

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### 6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.  
Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store at room temperature away from light and moisture.  
Incompatible products : Strong bases. strong acids.  
Incompatible materials : Sources of ignition. Direct sunlight.

### 7.3. Specific end use(s)

No additional information available

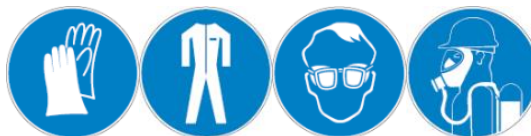
## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

N-NONANE UNLABELED (111-84-2 (Unlabeled))		
Italy - Portugal- USA ACGIH	ACGIH TWA (ppm)	200.0000000000 ppm Central Nervous System impairment.
TOLUENE UNLABELED (108-88-3)		
Italy - Portugal- USA ACGIH	ACGIH TWA (ppm)	20.0000000000 ppm Visual impairment, Female reproductive, Pregnancy loss
USA OSHA	OSHA PEL (TWA) (ppm)	100.0000000000 ppm USA. OSHA - TABLE Z-1 Limits for Air Contaminants 1910.1000
USA OSHA	OSHA PEL (STEL) (ppm)	150.0000000000 ppm USA. OSHA - TABLE Z-1 Limits for Air Contaminants 1910.1000

### 8.2. Exposure controls

Personal protective equipment : Avoid all unnecessary exposure. Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus.



Hand protection : Wear protective gloves.  
Eye protection : Chemical goggles or safety glasses.  
Respiratory protection : Wear approved mask.  
Other information : When using, do not eat, drink or smoke.

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### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid.
Color	: Colorless.
Odor	: characteristic.
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: -53 °C (- 63 °F) - lit
Freezing point	: No data available
Boiling point	: 151 °C (304 °F) - lit
Flash point	: 31.0 °C (87.8 °F) - closed cup
Self ignition temperature	: 205 °C (401 °F)
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: 12.4 hPa (9.3 mmHg) at 37.7 °C (99.9 °F)
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: Water: 0 %
Log Pow	: 5.65
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: 0.87 - 2.9 % (V)

#### 9.2. Other information

No additional information available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No additional information available

#### 10.2. Chemical stability

See storage and expiration date on CoA.

#### 10.3. Possibility of hazardous reactions

Not established.

#### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

#### 10.5. Incompatible materials

strong acids. Strong bases.

#### 10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Not classified

#### 6-METHOXY-2,2',4,4'-TETRABDE UNLABELED (102739-99-1)

ATE (oral)	500.000 mg/kg body weight
ATE (vapors)	0.500 mg/l/4h

#### N-NONANE UNLABELED (111-84-2 (Unlabeled))

LC50 inhalation rat (ppm)	3200 ppm/4h
ATE (dust, mist)	1.500 mg/l/4h

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<b>TOLUENE UNLABELED (108-88-3)</b>	
LD50 oral rat	> 5580 mg/kg
LD50 dermal rabbit	12196 mg/kg
LC50 inhalation rat (mg/l)	12500 - 28800 mg/m <sup>3</sup> 4 h
ATE (dermal)	12196.000 mg/kg body weight
ATE (gases)	4500.000 ppmV/4h
ATE (vapors)	12.500 mg/l/4h
ATE (dust, mist)	1.500 mg/l/4h

<b>6-METHOXY-2,2',4,4'-TETRABDE (RING-13C12, 99%) (102739-99-1 (Unlabeled))</b>	
ATE (oral)	500.000 mg/kg body weight
ATE (vapors)	0.050 mg/l/4h

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Suspected of causing cancer.
Reproductive toxicity	: Suspected of damaging the unborn child.
Specific target organ toxicity (single exposure)	: May cause drowsiness or dizziness.
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

### 12.1. Toxicity

<b>DIMETHYL TETRABROMOBISPHENOL A UNLABELED (37853-61-5)</b>	
LC50 fish 1	0.06 mg/l Pimephales promelas (fathead minnow) - 96 h
EC50 Daphnia 1	7.9 mg/l Daphnia magna (Water flea) - 48 h

<b>PENTACHLOROANISOLE (13C6, 99%) (1825-21-4 (unlabeled))</b>	
LC50 fish 1	0.65 mg/l Pimephales promelas (fathead minnow) - 96 h
EC50 Daphnia 1	0.027 mg/l Daphnia magna (Water flea) - 48 h

<b>TOLUENE UNLABELED (108-88-3)</b>	
LC50 fish 1	74 - 340 mg/l Lepomis macrochirus (Bluegill) - 96h
LC50 other aquatic organisms 1	10 mg/l Pseudokirchneriella subcapitata (Green algae) - 24 h
EC50 Daphnia 1	8 mg/l Daphnia magna (Water flea) - 24h
LC50 fish 2	7.63 mg/l Oncorhynchus mykiss (Rainbow trout) - 96 h
EC50 Daphnia 2	6 mg/l Daphnia magna (Water flea) - Immobilization - 48 h
ErC50 (algae)	245 mg/l Chlorella vulgaris (Fresh water algae) - 24 h
LOEC (chronic)	8.04 mg/l Pimephales promelas (Fathead minnow) - 7 d
NOEC (chronic)	5.44 mg/l Pimephales promelas (fathead minnow) - 7 d

<b>PENTACHLOROANISOLE UNLABELED (1825-21-4 (Unlabeled))</b>	
LC50 fish 1	0.65 mg/l Pimephales promelas (fathead minnow) - 96 h
EC50 Daphnia 1	0.027 mg/l Daphnia magna (Water flea) - 48 h

<b>DIMETHYL TETRABROMOBISPHENOL A (RING-13C12, 99%) (37853-61-5 (Unlabeled))</b>	
LC50 fish 1	0.06 mg/l Pimephales promelas (fathead minnow) - 96 h
EC50 Daphnia 1	7.9 mg/l Daphnia magna (Water flea) - 48 h

### 12.2. Persistence and degradability

<b>EXTENDED PHENOLIC CALIBRATION SOLUTION CS3 (UNLABELED/<sup>13</sup>C, 99%)</b>	
Persistence and degradability	Not established.

<b>6-METHOXY-2,2',4,4'-TETRABDE UNLABELED (102739-99-1)</b>	
Persistence and degradability	Not available.



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<b>DIMETHYL TETRABROMOBISPHENOL A UNLABELED (37853-61-5)</b>	
Persistence and degradability	Not available.
<b>METHYL TRICLOSAN (RING-<sup>13</sup>C<sub>12</sub>, 99%) (4640-01-1 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>METHYL TRICLOSAN UNLABELED (4640-01-1)</b>	
Persistence and degradability	Not available.
<b>PENTACHLOROANISOLE (<sup>13</sup>C<sub>6</sub>, 99%) (1825-21-4 (unlabeled))</b>	
Persistence and degradability	Not available.
<b>N-NONANE UNLABELED (111-84-2 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>PENTACHLOROANISOLE UNLABELED (1825-21-4 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>2,4,6-TRIBROMOANISOLE UNLABELED (607-99-8)</b>	
Persistence and degradability	Not available.
<b>2,4,5-TRIBROMOANISOLE UNLABELED (95970-10-8 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>2,4,6-TRIBROMOANISOLE (RING-<sup>13</sup>C<sub>6</sub>, 99%) (607-99-8 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>PENTABROMOANISOLE (<sup>13</sup>C<sub>6</sub>, 99%) (1825-26-9 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>PENTABROMOANISOLE UNLABELED (1825-26-9)</b>	
Persistence and degradability	Not available.
<b>2,4-DIBROMOANISOLE (RING-<sup>13</sup>C<sub>6</sub>, 99%) (21702-84-1 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>2,4-DIBROMOANISOLE UNLABELED (21702-84-1)</b>	
Persistence and degradability	Not available.
<b>6-METHOXY-2,2',4,4'-TETRABDE (RING-<sup>13</sup>C<sub>12</sub>, 99%) (102739-99-1 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>DIMETHYL TETRABROMOBISPHENOL A (RING-<sup>13</sup>C<sub>12</sub>, 99%) (37853-61-5 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,3,3',4',5-PENTACB UNLABELED (169295-14-1 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,3,3',4',5-PENTACB (<sup>13</sup>C<sub>12</sub>, 99%) (169295-14-1 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,2',3,4',5,5'-HEXACB UNLABELED (169295-19-6 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,2',3,4',5,5'-HEXACB (<sup>13</sup>C<sub>12</sub>, 99%) (169295-19-6 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,2',3,4'-TETRABDE UNLABELED (602326-25-0 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,2',3,4',5,5',6-HEPTACB UNLABELED (169295-23-2 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,2',3,4',5,5',6-HEPTACB (<sup>13</sup>C<sub>12</sub>, 99%) (1629523-2 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>3-METHOXY-2,2',4,4'-TETRABDE UNLABELED (602326-28-0 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>5-METHOXY-2,2',4,4'-TETRABDE UNLABELED (602326-19-2 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4'-METHOXY-2,2',4,5'-TETRABDE UNLABELED (476430-88-3 (Unlabeled))</b>	

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Persistence and degradability	Not available.
<b>5'-METHOXY-2,2',4,4',5-PENTABDE UNLABELED (923925-51-3 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>6-METHOXY-2,2',4,4',5-PENTABDE UNLABELED (497106-83-9 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>6'-METHOXY-2,2',4,4',6-PENTABDE (13C12, 99%) (1391119-70-2 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>1,2,3,4-TETRACHLORODIBENZO-P-DIOXIN (13C6, 99%) (30746-58-8 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>3,3',4,4'-TETRABDE (BDE-77) (13C12, 99%) (93703-48-1 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>2,2',3,4,4',6-HEXABDE (BDE-139) (13C12, 99%) (36483-60-0 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>2,4,5-TRIBROMOANISOLE (RING-13C6, 99%) (95970-10-8 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>12.3. Bioaccumulative potential</b>	
<b>EXTENDED PHENOLIC CALIBRATION SOLUTION CS3 (UNLABELED/<sup>13</sup>C, 99%)</b>	
Log Pow	5.65
Bioaccumulative potential	Not established.
<b>6-METHOXY-2,2',4,4'-TETRABDE UNLABELED (102739-99-1)</b>	
Bioaccumulative potential	Not available.
<b>DIMETHYL TETRABROMOBISPHENOL A UNLABELED (37853-61-5)</b>	
Bioaccumulative potential	Not available.
<b>METHYL TRICLOSAN (RING-13C12, 99%) (4640-01-1 (Unlabeled))</b>	
Log Pow	5.269
Bioaccumulative potential	Not available.
<b>METHYL TRICLOSAN UNLABELED (4640-01-1)</b>	
Log Pow	5.269
Bioaccumulative potential	Not available.
<b>PENTACHLOROANISOLE (13C6, 99%) (1825-21-4 (unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>N-NONANE UNLABELED (111-84-2 (Unlabeled))</b>	
Log Pow	5.65
Bioaccumulative potential	Indication of bioaccumulation.
<b>TOLUENE UNLABELED (108-88-3)</b>	
Bioaccumulative potential	Not available.
<b>PENTACHLOROANISOLE UNLABELED (1825-21-4 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>2,4-DIBROMOANISOLE (RING-13C6, 99%) (21702-84-1 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>2,4-DIBROMOANISOLE UNLABELED (21702-84-1)</b>	
Bioaccumulative potential	Not available.
<b>6-METHOXY-2,2',4,4'-TETRABDE (RING-13C12, 99%) (102739-99-1 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>DIMETHYL TETRABROMOBISPHENOL A (RING-13C12, 99%) (37853-61-5 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4-METHOXY-2,3,3',4',5-PENTACB UNLABELED (169295-14-1 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4-METHOXY-2,3,3',4',5-PENTACB (13C12, 99%) (169295-14-1 (Unlabeled))</b>	
Bioaccumulative potential	Not available.

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<b>4-METHOXY-2,2',3,4',5,5'-HEXACB UNLABELED (169295-19-6 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4-METHOXY-2,2',3,4',5,5'-HEXACB (13C12, 99%) (169295-19-6 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4-METHOXY-2,2',3,4'-TETRABDE UNLABELED (602326-25-0 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4-METHOXY-2,2',3,4',5,5',6-HEPTACB UNLABELED (169295-23-2 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4-METHOXY-2,2',3,4',5,5',6-HEPTACB (13C12, 99%) (1629523-2 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>3-METHOXY-2,2',4,4'-TETRABDE UNLABELED (602326-28-0 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>5-METHOXY-2,2',4,4'-TETRABDE UNLABELED (602326-19-2 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4'-METHOXY-2,2',4,5'-TETRABDE UNLABELED (476430-88-3 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>5'-METHOXY-2,2',4,4',5-PENTABDE UNLABELED (923925-51-3 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>6-METHOXY-2,2',4,4',5-PENTABDE UNLABELED (497106-83-9 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>6'-METHOXY-2,2',4,4',6-PENTABDE (13C12, 99%) (1391119-70-2 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>1,2,3,4-TETRACHLORODIBENZO-P-DIOXIN (13C6, 99%) (30746-58-8 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>3,3',4,4'-TETRABDE (BDE-77) (13C12, 99%) (93703-48-1 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>2,2',3,4,4',6-HEXABDE (BDE-139) (13C12, 99%) (36483-60-0 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>12.4. Mobility in soil</b>	
<b>6-METHOXY-2,2',4,4'-TETRABDE UNLABELED (102739-99-1)</b>	
Ecology - soil	Not available.
<b>DIMETHYL TETRABROMOBISPHENOL A UNLABELED (37853-61-5)</b>	
Ecology - soil	Not available.
<b>METHYL TRICLOSAN (RING-13C12, 99%) (4640-01-1 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>METHYL TRICLOSAN UNLABELED (4640-01-1)</b>	
Ecology - soil	Not available.
<b>PENTACHLOROANISOLE (13C6, 99%) (1825-21-4 (unlabeled))</b>	
Ecology - soil	Not available.
<b>N-NONANE UNLABELED (111-84-2 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>TOLUENE UNLABELED (108-88-3)</b>	
Ecology - soil	Not available.
<b>PENTACHLOROANISOLE UNLABELED (1825-21-4 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>2,4,6-TRIBROMOANISOLE UNLABELED (607-99-8)</b>	
Ecology - soil	Not available.
<b>2,4,5-TRIBROMOANISOLE UNLABELED (95970-10-8 (Unlabeled))</b>	
Ecology - soil	Not available.

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<b>2,4,6-TRIBROMOANISOLE (RING-<sup>13</sup>C6, 99%) (607-99-8 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>PENTABROMOANISOLE (13C6, 99%) (1825-26-9 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>PENTABROMOANISOLE UNLABELED (1825-26-9)</b>	
Ecology - soil	Not available.
<b>2,4-DIBROMOANISOLE (RING-<sup>13</sup>C6, 99%) (21702-84-1 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>2,4-DIBROMOANISOLE UNLABELED (21702-84-1)</b>	
Ecology - soil	Not available.
<b>6-METHOXY-2,2',4,4'-TETRABDE (RING-<sup>13</sup>C12, 99%) (102739-99-1 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>DIMETHYL TETRABROMOBISPHENOL A (RING-<sup>13</sup>C12, 99%) (37853-61-5 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,3,3',4',5-PENTACB UNLABELED (169295-14-1 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,3,3',4',5-PENTACB (13C12, 99%) (169295-14-1 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,2',3,4',5,5'-HEXACB UNLABELED (169295-19-6 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,2',3,4',5,5'-HEXACB (13C12, 99%) (169295-19-6 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,2',3,4'-TETRABDE UNLABELED (602326-25-0 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,2',3,4',5,5',6-HEPTACB UNLABELED (169295-23-2 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,2',3,4',5,5',6-HEPTACB (13C12, 99%) (1629523-2 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>3-METHOXY-2,2',4,4'-TETRABDE UNLABELED (602326-28-0 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>5-METHOXY-2,2',4,4'-TETRABDE UNLABELED (602326-19-2 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4'-METHOXY-2,2',4,5'-TETRABDE UNLABELED (476430-88-3 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>5'-METHOXY-2,2',4,4',5-PENTABDE UNLABELED (923925-51-3 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>6-METHOXY-2,2',4,4',5-PENTABDE UNLABELED (497106-83-9 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>6'-METHOXY-2,2',4,4',6-PENTABDE (13C12, 99%) (1391119-70-2 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>1,2,3,4-TETRACHLORODIBENZO-P-DIOXIN (13C6, 99%) (30746-58-8 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>3,3',4,4'-TETRABDE (BDE-77) (13C12, 99%) (93703-48-1 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>2,2',3,4,4',6-HEXABDE (BDE-139) (13C12, 99%) (36483-60-0 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>2,4,5-TRIBROMOANISOLE (RING-<sup>13</sup>C6, 99%) (95970-10-8 (Unlabeled))</b>	
Ecology - soil	Not available.

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### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

Other information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Regional legislation (waste) : Waste materials should be disposed of under conditions which meet Federal, State, and Local environmental control regulations.

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

### 14.1. UN number

UN-No.(DOT) : UN1920

### 14.2. UN proper shipping name

DOT Proper Shipping Name : Nonanes

Department of Transportation (DOT) Hazard Classes : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

Hazard labels (DOT) : 3 - Flammable liquid



Packing group (DOT) : III - Minor Danger

DOT Special Provisions (49 CFR 172.102) : B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then the bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has a flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable.

IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).

T2 - 1.5 178.274(d)(2) Normal..... 178.275(d)(3)

TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling =  $97 / 1 + a (tr - tf)$  Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.

DOT Packaging Exceptions (49 CFR 173.xxx) : 150

DOT Packaging Non Bulk (49 CFR 173.xxx) : 203

DOT Packaging Bulk (49 CFR 173.xxx) : 242

Marine pollutant : No

### 14.3. Additional information

Other information : No supplementary information available.

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### Overland transport

Packing group (ADR) : III  
Class (ADR) : 3 - Flammable liquid  
Hazard identification number (Kemler No.) : 30  
Classification code (ADR) : F1  
Danger labels (ADR) : 3 - Flammable liquids



Orange plates : 

Tunnel restriction code : D/E  
Limited quantities (ADR) : 5L  
EAC : 3Y  
Excepted quantities (ADR) : E1

### Transport by sea

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.  
MFAG-No : 128

### Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 60 L  
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 220 L

### 14.4. Environmental hazards

Other information : No supplementary information available.

### 14.5. Special precautions for user

### 14.6. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### N-NONANE UNLABELED (111-84-2 (Unlabeled))

SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard
-------------------------------------	--

#### TOLUENE UNLABELED (108-88-3)

Listed on SARA Section 313 (Specific toxic chemical listings)	
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard

### 15.2. International regulations

#### CANADA

#### EXTENDED PHENOLIC CALIBRATION SOLUTION CS3 (UNLABELED/13C, 99%)

Listed on the Canadian DSL (Domestic Substances List) inventory.

#### TOLUENE UNLABELED (108-88-3)

Listed on the Canadian DSL (Domestic Substances List) inventory.

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### 15.2.1. National regulations

No additional information available

### 15.3. US State regulations

#### N-NONANE UNLABELED (111-84-2 (Unlabeled))

U.S. - Massachusetts - Right To Know List  
U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

#### TOLUENE UNLABELED (108-88-3)

U.S. - Massachusetts - Right To Know List  
U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
WARNING! This product contains a chemical known by the state of California to cause birth defects or other reproductive harm.

## SECTION 16: Other information

Other information : None.

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Full text of R-, H- and EUH-phrases::

Acute Tox. 1 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 1
Acute Tox. 2 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 2
Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Aquatic Chronic 4	Hazardous to the aquatic environment - Chronic Hazard Category 4
Asp. Tox. 1	Aspiration hazard Category 1
Carc. 1A	Carcinogenicity Category 1A
Carc. 2	Carcinogenicity Category 2
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Flam. Liq. 2	Flammable liquids Category 2
Flam. Liq. 3	Flammable liquids Category 3
Repr. 2	Reproductive toxicity Category 2
Skin Irrit. 2	skin corrosion/irritation Category 2
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
STOT SE 2	Specific target organ toxicity (single exposure) Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H225	Highly flammable liquid and vapor
H226	Flammable liquid and vapor
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H312	Harmful in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H330	Fatal if inhaled
H332	Harmful if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H350	May cause cancer
H351	Suspected of causing cancer
H361d	Suspected of damaging the unborn child
H371	May cause damage to organs
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H413	May cause long lasting harmful effects to aquatic life
R10	Flammable
R11	Highly flammable
R20	Harmful by inhalation
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed
R21	Harmful in contact with skin
R22	Harmful if swallowed
R23	Toxic by inhalation
R36/37/38	Irritating to eyes, respiratory system and skin
R36/38	Irritating to eyes and skin
R40	Limited evidence of a carcinogenic effect
R45	May cause cancer
R48/20/21/22	Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed
R48/21/22	Harmful: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed
R49	May cause cancer by inhalation
R50	Very toxic to aquatic organisms
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R51	Toxic to aquatic organisms
R53	May cause long-term adverse effects in the aquatic environment
R62	Possible risk of impaired fertility
R63	Possible risk of harm to the unborn child



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R65	Harmful: may cause lung damage if swallowed
R67	Vapors may cause drowsiness and dizziness
F	Highly flammable
N	Dangerous for the environment
T	Toxic
Xi	Irritant
Xn	Harmful

CIL Multi-Solvent Mixture SDS

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*



# EXTENDED PHENOLIC CALIBRATION SOLUTION CS4 (UNLABELED/<sup>13</sup>C, 99%)

## Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 25/06/2014

Revision date:

:

Version: 1.0

### ES-5510-CS4

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

Product form : Mixtures  
Product name. : EXTENDED PHENOLIC CALIBRATION SOLUTION CS4 (UNLABELED/<sup>13</sup>C, 99%)  
Product code : ES-5510-CS4

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### 1.2.1. Relevant identified uses

Industrial/Professional use spec : For professional use only.  
Industrial.

#### 1.2.2. Uses advised against

No additional information available

### 1.3. Details of the supplier of the safety data sheet

Cambridge Isotope Laboratories, Inc.  
50 Frontage Road  
Andover, MA 01810  
USA

USA: 1-800-322-1174 Int: 1-978-749-8000  
[cilsales@isotope.com](mailto:cilsales@isotope.com) [www.isotope.com](http://www.isotope.com)

### Emergency telephone number

Emergency numbers:

Chemtrec: 1-800-424-9300 (24 hours)  
International: 1-202-483-7616 (24 hours)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 2	H225
Skin Irrit. 2	H315
Eye Irrit. 2	H319
Carc. 2	H351
STOT SE 3	H336
Repr. 2	H361d

Full text of H-phrases: see section 16

#### Classification according to Directive 67/548/EEC or 1999/45/EC

Carc.Cat.3; R40  
F; R11  
Xn; R20  
Xn; R65

Full text of R-phrases: see section 16

#### Classification (GHS-US)

Flam. Liq. 2	H225
Skin Irrit. 2	H315
Eye Irrit. 2A	H319
Carc. 2	H351
Repr. 2	H361
STOT SE 3	H336
Aquatic Acute 2	H401

#### Adverse physicochemical, human health and environmental effects

No additional information available

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### 2.2. Label elements

#### Labeling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



Signal word (CLP) :

Danger

Hazardous ingredients :

TOLUENE UNLABELED

Hazard statements (CLP) :

H225 - Highly flammable liquid and vapor  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H336 - May cause drowsiness or dizziness  
H351 - Suspected of causing cancer  
H361 - Suspected of damaging the unborn child

Precautionary statements (CLP) :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
P233 - Keep container tightly closed  
P240 - Ground/bond container and receiving equipment  
P241 - Use explosion-proof electrical, lighting, ventilating equipment  
P261 - Avoid breathing dust, fume, gas, mist, spray, vapors  
P264 - Wash Both hands thoroughly after handling  
P271 - Use only outdoors or in a well-ventilated area  
P280 - Wear protective clothing, protective gloves

#### GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H225 - Highly flammable liquid and vapor  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H336 - May cause drowsiness or dizziness  
H351 - Suspected of causing cancer (Dermal, Inhalation, oral)  
H361 - Suspected of damaging fertility or the unborn child (Dermal, oral, Inhalation)  
H401 - Toxic to aquatic life

Precautionary statements (GHS-US) :

P201 - Obtain special instructions before use  
P202 - Do not handle until all safety precautions have been read and understood  
P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking  
P233 - Keep container tightly closed  
P240 - Ground/bond container and receiving equipment  
P241 - Use explosion-proof electrical, lighting, ventilating equipment  
P242 - Use only non-sparking tools  
P243 - Take precautionary measures against static discharge  
P261 - Avoid breathing dust, fume, gas, mist, spray, vapors  
P264 - Wash Both hands thoroughly after handling  
P271 - Use only outdoors or in a well-ventilated area  
P273 - Avoid release to the environment  
P280 - Wear protective clothing, protective gloves  
P302+P352 - IF ON SKIN: Wash with plenty of soap and water  
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P308+P313 - IF exposed or concerned: Get medical advice/attention  
P312 - Call a POISON CENTER/doctor/physician if you feel unwell  
P321 - Specific treatment (see Hazard pictograms (CLP) on this label)  
P332+P313 - If skin irritation occurs: Get medical advice/attention

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P337+P313 - If eye irritation persists: Get medical advice/attention  
P362 - Take off contaminated clothing and wash before reuse  
P370+P378 - In case of fire: Use Carbon dioxide., Dry chemical., Alcohol resistant foam., Water spray for extinction  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed  
P403+P235 - Store in a well-ventilated place. Keep cool  
P405 - Store locked up  
P501 - Dispose of contents/container to Comply with applicable regulations.

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

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### 3.2. Mixtures

Name	Product identifier	%	Classification according to Directive 67/548/EEC
N-NONANE UNLABELED	(CAS No)111-84-2 (Unlabeled) (EC no)203-913-4	97.05492194	R10 Xn; R20 Xn; R65 R67
TOLUENE UNLABELED	(CAS No)108-88-3 (EC no)203-625-9 (EC index no)601-021-00-3	2.94451277	Repr.Cat.3; R62 Repr.Cat.3; R63 F; R11 Xi; R36/38 Carc.Cat.3; R40 N; R51 Xn; R20 R67 Xn; R65
METHYL TRICLOSAN (RING-13C12, 99%)	(CAS No)4640-01-1 (Unlabeled)	0.00014576	Xn; R20/21/22 N; R50/53
PENTACHLOROANISOLE (13C6, 99%)	(CAS No)1825-21-4 (unlabeled)	0.00014505	Xn; R22 N; R50/53
3,3',4,4'-TETRABDE (BDE-77) (13C12, 99%)	(CAS No)93703-48-1 (Unlabeled)	0.0001039	Xn; R20/21/22 Xi; R36/37/38
2,2',3,4,4',6-HEXABDE (BDE-139) (13C12, 99%)	(CAS No)36483-60-0 (Unlabeled)	0.0001039	Xn; R20/21/22 Xi; R36/37/38
PENTACHLOROANISOLE UNLABELED	(CAS No)1825-21-4 (Unlabeled)	0.00002918	Xn; R22 N; R50/53
METHYL TRICLOSAN UNLABELED	(CAS No)4640-01-1	0.00002907	Xn; R20/21/22 N; R50/53
2,4-DIBROMOANISOLE (RING-13C6, 99%)	(CAS No)21702-84-1 (Unlabeled) (EC no)244-536-5	0.00001461	Xi; R36/37/38
2,4,5-TRIBROMOANISOLE (RING-13C6, 99%)	(CAS No)95970-10-8 (Unlabeled)	0.00001444	R53
2,4,6-TRIBROMOANISOLE (RING-13C6, 99%)	(CAS No)607-99-8 (Unlabeled)	0.00001444	R53
4-METHOXY-2,3,3',4',5'-PENTACB (13C12, 99%)	(CAS No)169295-14-1 (Unlabeled) (EC index no)602-039-00-4	0.00001441	Xn; R48/20/21/22 N; R50/53
4-METHOXY-2,2',3,4',5,5'-HEXACB (13C12, 99%)	(CAS No)169295-19-6 (Unlabeled) (EC index no)602-039-00-4	0.00001436	Xn; R48/20/21/22 N; R50/53
4-METHOXY-2,2',3,4',5,5',6-HEPTACB (13C12, 99%)	(CAS No)1629523-2 (Unlabeled) (EC index no)602-039-00-4	0.00001432	Xn; R48/20/21/22 N; R50/53
PENTABROMOANISOLE (13C6, 99%)	(CAS No)1825-26-9 (Unlabeled)	0.00001425	R53
6-METHOXY-2,2',4,4'-TETRABDE (RING-13C12, 99%)	(CAS No)102739-99-1 (Unlabeled)	0.00001424	T; R23 Xn; R22 Xi; R36/37/38
6'-METHOXY-2,2',4,4',6-PENTABDE (13C12, 99%)	(CAS No)1391119-70-2 (Unlabeled)	0.00001419	Xn; R20/21/22 Xi; R36/37/38
2,2',3,3',4,5,5',6,6'-NONACB (PCB-208) (13C12, 99%)	(CAS No)52663-77-1 (Unlabeled)	0.00001386	Not classified
DIMETHYL TETRABROMOBISPHENOL A (RING-13C12, 99%)	(CAS No)37853-61-5 (Unlabeled) (EC no)201-236-9	0.00000729	Xi; R36/37/38 N; R50
1,2,3,4-TETRACHLORODIBENZO-P-DIOXIN (13C6, 99%)	(CAS No)30746-58-8 (Unlabeled)	0.00000346	Carc.Cat.1; R45 Carc.Cat.1; R49 Xn; R20 Xn; R21 Xn; R22
2,4-DIBROMOANISOLE UNLABELED	(CAS No)21702-84-1 (EC no)244-536-5	0.00000292	Xi; R36/37/38
2,4,6-TRIBROMOANISOLE UNLABELED	(CAS No)607-99-8	0.00000289	R53
2,4,5-TRIBROMOANISOLE UNLABELED	(CAS No)95970-10-8 (Unlabeled)	0.00000289	R53

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Name	Product identifier	%	Classification according to Directive 67/548/EEC
4-METHOXY-2,3,3',4',5-PENTACB UNLABELED	(CAS No)169295-14-1 (Unlabeled) (EC index no)602-039-00-4	0.00000289	Xn; R48/20/21/22 N; R50/53
4-METHOXY-2,2',3,4',5,5'-HEXACB UNLABELED	(CAS No)169295-19-6 (Unlabeled) (EC index no)602-039-00-4	0.00000288	Xn; R48/20/21/22 N; R50/53
4-METHOXY-2,2',3,4',5,5',6-HEPTACB UNLABELED	(CAS No)169295-23-2 (Unlabeled) (EC index no)602-039-00-4	0.00000287	Xn; R48/20/21/22 N; R50/53
6-METHOXY-2,2',4,4'-TETRABDE UNLABELED	(CAS No)102739-99-1	0.00000285	T; R23 Xn; R22 Xi; R36/37/38
PENTABROMOANISOLE UNLABELED	(CAS No)1825-26-9	0.00000285	R53
4-METHOXY-2,2',3,4'-TETRABDE UNLABELED	(CAS No)602326-25-0 (Unlabeled)	0.00000285	Xn; R48/21/22 N; R50/53
3-METHOXY-2,2',4,4'-TETRABDE UNLABELED	(CAS No)602326-28-0 (Unlabeled)	0.00000285	Xn; R20/21/22 N; R50/53
5-METHOXY-2,2',4,4'-TETRABDE UNLABELED	(CAS No)602326-19-2 (Unlabeled)	0.00000285	Xn; R20/21/22 N; R50/53
4'-METHOXY-2,2',4,5'-TETRABDE UNLABELED	(CAS No)476430-88-3 (Unlabeled)	0.00000285	Xn; R20/21/22 Xi; R36/37/38
5'-METHOXY-2,2',4,4',5-PENTABDE UNLABELED	(CAS No)923925-51-3 (Unlabeled)	0.00000284	Carc. Cat. 1; R45 Carc. Cat. 1; R49 Xn; R20 Xn; R21 Xn; R22 N; R50
6-METHOXY-2,2',4,4',5-PENTABDE UNLABELED	(CAS No)497106-83-9 (Unlabeled)	0.00000284	Carc. Cat. 1; R45 Carc. Cat. 1; R49 Xn; R20 Xn; R21 Xn; R22 N; R50
DIMETHYL TETRABROMOBISPHENOL A UNLABELED	(CAS No)37853-61-5 (EC no)201-236-9	0.00000146	Xi; R36/37/38 N; R50

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
N-NONANE UNLABELED	(CAS No)111-84-2 (Unlabeled) (EC no)203-913-4	97.05492194	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H336 Asp. Tox. 1, H304
TOLUENE UNLABELED	(CAS No)108-88-3 (EC no)203-625-9 (EC index no)601-021-00-3	2.94451277	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Carc. 2, H351 Repr. 2, H361d STOT SE 3, H336 STOT SE 2, H371 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Acute 1, H400
METHYL TRICLOSAN (RING-13C12, 99%)	(CAS No)4640-01-1 (Unlabeled)	0.00014576	Aquatic Acute 1, H400
PENTACHLOROANISOLE (13C6, 99%)	(CAS No)1825-21-4 (unlabeled)	0.00014505	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
3,3',4,4'-TETRABDE (BDE-77) (13C12, 99%)	(CAS No)93703-48-1 (Unlabeled)	0.0001039	Not classified
2,2',3,4,4',6-HEXABDE (BDE-139) (13C12, 99%)	(CAS No)36483-60-0 (Unlabeled)	0.0001039	Not classified
PENTACHLOROANISOLE UNLABELED	(CAS No)1825-21-4 (Unlabeled)	0.00002918	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
METHYL TRICLOSAN UNLABELED	(CAS No)4640-01-1	0.00002907	Aquatic Acute 1, H400

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2,4-DIBROMOANISOLE (RING-13C6, 99%)	(CAS No)21702-84-1 (Unlabeled) (EC no)244-536-5	0.00001461	Skin Irrit. 2, H315
2,4,5-TRIBROMOANISOLE (RING-13C6, 99%)	(CAS No)95970-10-8 (Unlabeled)	0.00001444	Aquatic Chronic 4, H413
2,4,6-TRIBROMOANISOLE (RING-13C6, 99%)	(CAS No)607-99-8 (Unlabeled)	0.00001444	Aquatic Chronic 4, H413
4-METHOXY-2,3,3',4',5-PENTACB (13C12, 99%)	(CAS No)169295-14-1 (Unlabeled) (EC index no)602-039-00-4	0.00001441	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
4-METHOXY-2,2',3,4',5,5'-HEXACB (13C12, 99%)	(CAS No)169295-19-6 (Unlabeled) (EC index no)602-039-00-4	0.00001436	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
4-METHOXY-2,2',3,4',5,5',6-HEPTACB (13C12, 99%)	(CAS No)1629523-2 (Unlabeled) (EC index no)602-039-00-4	0.00001432	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
PENTABROMOANISOLE (13C6, 99%)	(CAS No)1825-26-9 (Unlabeled)	0.00001425	Aquatic Chronic 4, H413
6-METHOXY-2,2',4,4'-TETRABDE (RING-13C12, 99%)	(CAS No)102739-99-1 (Unlabeled)	0.00001424	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Acute Tox. 1 (Inhalation:vapour), H330 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
6'-METHOXY-2,2',4,4'-PENTABDE (13C12, 99%)	(CAS No)1391119-70-2 (Unlabeled)	0.00001419	Not classified
2,2',3,3',4,5,5',6,6'-NONACB (PCB-208) (13C12, 99%)	(CAS No)52663-77-1 (Unlabeled)	0.00001386	Not classified
DIMETHYL TETRABROMOBISPHENOL A (RING-13C12, 99%)	(CAS No)37853-61-5 (Unlabeled) (EC no)201-236-9	0.00000729	Skin Irrit. 2, H315 STOT SE 3, H336 Aquatic Acute 1, H400
1,2,3,4-TETRACHLORODIBENZO-P-DIOXIN (13C6, 99%)	(CAS No)30746-58-8 (Unlabeled)	0.00000346	Carc. 1A, H350 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312
2,4-DIBROMOANISOLE UNLABELED	(CAS No)21702-84-1 (EC no)244-536-5	0.00000292	Skin Irrit. 2, H315
2,4,6-TRIBROMOANISOLE UNLABELED	(CAS No)607-99-8	0.00000289	Aquatic Chronic 4, H413
2,4,5-TRIBROMOANISOLE UNLABELED	(CAS No)95970-10-8 (Unlabeled)	0.00000289	Aquatic Chronic 4, H413
4-METHOXY-2,3,3',4',5-PENTACB UNLABELED	(CAS No)169295-14-1 (Unlabeled) (EC index no)602-039-00-4	0.00000289	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
4-METHOXY-2,2',3,4',5,5'-HEXACB UNLABELED	(CAS No)169295-19-6 (Unlabeled) (EC index no)602-039-00-4	0.00000288	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
4-METHOXY-2,2',3,4',5,5',6-HEPTACB UNLABELED	(CAS No)169295-23-2 (Unlabeled) (EC index no)602-039-00-4	0.00000287	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
6-METHOXY-2,2',4,4'-TETRABDE UNLABELED	(CAS No)102739-99-1	0.00000285	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Acute Tox. 2 (Inhalation:vapour), H330 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
PENTABROMOANISOLE UNLABELED	(CAS No)1825-26-9	0.00000285	Aquatic Chronic 4, H413
4-METHOXY-2,2',3,4'-TETRABDE UNLABELED	(CAS No)602326-25-0 (Unlabeled)	0.00000285	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 STOT SE 2, H371 Aquatic Chronic 1, H410
3-METHOXY-2,2',4,4'-TETRABDE UNLABELED	(CAS No)602326-28-0 (Unlabeled)	0.00000285	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312
5-METHOXY-2,2',4,4'-TETRABDE UNLABELED	(CAS No)602326-19-2 (Unlabeled)	0.00000285	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312
4'-METHOXY-2,2',4,5'-TETRABDE UNLABELED	(CAS No)476430-88-3 (Unlabeled)	0.00000285	Not classified
5'-METHOXY-2,2',4,4',5-PENTABDE UNLABELED	(CAS No)923925-51-3 (Unlabeled)	0.00000284	Carc. 1A, H350 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312 Aquatic Acute 1, H400
6-METHOXY-2,2',4,4',5-PENTABDE UNLABELED	(CAS No)497106-83-9 (Unlabeled)	0.00000284	Carc. 1A, H350 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312 Aquatic Acute 1, H400

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
DIMETHYL TETRABROMOBISPHENOL A UNLABELED	(CAS No)37853-61-5 (EC no)201-236-9	0.00000146	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 1, H400 (M=10)

Name	Product identifier	%	Classification (GHS-US)
N-NONANE UNLABELED	(CAS No)111-84-2 (Unlabeled)	97.05492194	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H336 Asp. Tox. 1, H304
TOLUENE UNLABELED	(CAS No)108-88-3	2.94451277	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Carc. 2, H351 Repr. 2, H361 STOT SE 3, H336 STOT SE 2, H371 Asp. Tox. 1, H304 Aquatic Acute 1, H400

Full text of R-, H- and EUH-phrases: see section 16

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Assure fresh air breathing. Allow the victim to rest.
- First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

#### 4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

#### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

- suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

#### 5.2. Special hazards arising from the substance or mixture

No additional information available

#### 5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

##### 6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

#### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.



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### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store at room temperature away from light and moisture.  
Incompatible products : Strong bases. strong acids.  
Incompatible materials : Sources of ignition. Direct sunlight.

### 7.3. Specific end use(s)

No additional information available

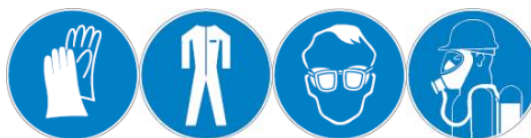
## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

N-NONANE UNLABELED (111-84-2 (Unlabeled))		
Italy - Portugal- USA ACGIH	ACGIH TWA (ppm)	200.0000000000 ppm Central Nervous System impairment.
TOLUENE UNLABELED (108-88-3)		
Italy - Portugal- USA ACGIH	ACGIH TWA (ppm)	20.0000000000 ppm Visual impairment, Female reproductive, Pregnancy loss
USA OSHA	OSHA PEL (TWA) (ppm)	100.0000000000 ppm USA. OSHA - TABLE Z-1 Limits for Air Contaminants 1910.1000
USA OSHA	OSHA PEL (STEL) (ppm)	150.0000000000 ppm USA. OSHA - TABLE Z-1 Limits for Air Contaminants 1910.1000

### 8.2. Exposure controls

Personal protective equipment : Avoid all unnecessary exposure. Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus.



Hand protection : Wear protective gloves.  
Eye protection : Chemical goggles or safety glasses.  
Respiratory protection : Wear approved mask.  
Other information : When using, do not eat, drink or smoke.

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### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid.
Color	: Colorless.
Odor	: characteristic.
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: -53 °C (- 63 °F) - lit
Freezing point	: No data available
Boiling point	: 151 °C (304 °F) - lit
Flash point	: 31.0 °C (87.8 °F) - closed cup
Self ignition temperature	: 205 °C (401 °F)
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: 12.4 hPa (9.3 mmHg) at 37.7 °C (99.9 °F)
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: Water: 0 %
Log Pow	: 5.65
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: 0.87 - 2.9 % (V)

#### 9.2. Other information

No additional information available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No additional information available

#### 10.2. Chemical stability

See storage and expiration date on CoA.

#### 10.3. Possibility of hazardous reactions

Not established.

#### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

#### 10.5. Incompatible materials

strong acids. Strong bases.

#### 10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Not classified

#### 6-METHOXY-2,2',4,4'-TETRABDE UNLABELED (102739-99-1)

ATE (oral)	500.000 mg/kg body weight
ATE (vapors)	0.500 mg/l/4h

#### N-NONANE UNLABELED (111-84-2 (Unlabeled))

LC50 inhalation rat (ppm)	3200 ppm/4h
ATE (dust, mist)	1.500 mg/l/4h

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<b>TOLUENE UNLABELED (108-88-3)</b>	
LD50 oral rat	> 5580 mg/kg
LD50 dermal rabbit	12196 mg/kg
LC50 inhalation rat (mg/l)	12500 - 28800 mg/m <sup>3</sup> 4 h
ATE (dermal)	12196.000 mg/kg body weight
ATE (gases)	4500.000 ppmV/4h
ATE (vapors)	12.500 mg/l/4h
ATE (dust, mist)	1.500 mg/l/4h

<b>6-METHOXY-2,2',4,4'-TETRABDE (RING-13C12, 99%) (102739-99-1 (Unlabeled))</b>	
ATE (oral)	500.000 mg/kg body weight
ATE (vapors)	0.050 mg/l/4h

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Suspected of causing cancer.
Reproductive toxicity	: Suspected of damaging the unborn child.
Specific target organ toxicity (single exposure)	: May cause drowsiness or dizziness.
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

### 12.1. Toxicity

<b>DIMETHYL TETRABROMOBISPHENOL A UNLABELED (37853-61-5)</b>	
LC50 fish 1	0.06 mg/l Pimephales promelas (fathead minnow) - 96 h
EC50 Daphnia 1	7.9 mg/l Daphnia magna (Water flea) - 48 h

<b>PENTACHLOROANISOLE (13C6, 99%) (1825-21-4 (unlabeled))</b>	
LC50 fish 1	0.65 mg/l Pimephales promelas (fathead minnow) - 96 h
EC50 Daphnia 1	0.027 mg/l Daphnia magna (Water flea) - 48 h

<b>TOLUENE UNLABELED (108-88-3)</b>	
LC50 fish 1	74 - 340 mg/l Lepomis macrochirus (Bluegill) - 96h
LC50 other aquatic organisms 1	10 mg/l Pseudokirchneriella subcapitata (Green algae) - 24 h
EC50 Daphnia 1	8 mg/l Daphnia magna (Water flea) - 24h
LC50 fish 2	7.63 mg/l Oncorhynchus mykiss (Rainbow trout) - 96 h
EC50 Daphnia 2	6 mg/l Daphnia magna (Water flea) - Immobilization - 48 h
ErC50 (algae)	245 mg/l Chlorella vulgaris (Fresh water algae) - 24 h
LOEC (chronic)	8.04 mg/l Pimephales promelas (Fathead minnow) - 7 d
NOEC (chronic)	5.44 mg/l Pimephales promelas (fathead minnow) - 7 d

<b>PENTACHLOROANISOLE UNLABELED (1825-21-4 (Unlabeled))</b>	
LC50 fish 1	0.65 mg/l Pimephales promelas (fathead minnow) - 96 h
EC50 Daphnia 1	0.027 mg/l Daphnia magna (Water flea) - 48 h

<b>DIMETHYL TETRABROMOBISPHENOL A (RING-13C12, 99%) (37853-61-5 (Unlabeled))</b>	
LC50 fish 1	0.06 mg/l Pimephales promelas (fathead minnow) - 96 h
EC50 Daphnia 1	7.9 mg/l Daphnia magna (Water flea) - 48 h

### 12.2. Persistence and degradability

<b>EXTENDED PHENOLIC CALIBRATION SOLUTION CS4 (UNLABELED/<sup>13</sup>C, 99%)</b>	
Persistence and degradability	Not established.

<b>6-METHOXY-2,2',4,4'-TETRABDE UNLABELED (102739-99-1)</b>	
Persistence and degradability	Not available.

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<b>DIMETHYL TETRABROMOBISPHENOL A UNLABELED (37853-61-5)</b>	
Persistence and degradability	Not available.
<b>METHYL TRICLOSAN (RING-<sup>13</sup>C<sub>12</sub>, 99%) (4640-01-1 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>METHYL TRICLOSAN UNLABELED (4640-01-1)</b>	
Persistence and degradability	Not available.
<b>PENTACHLOROANISOLE (13C<sub>6</sub>, 99%) (1825-21-4 (unlabeled))</b>	
Persistence and degradability	Not available.
<b>N-NONANE UNLABELED (111-84-2 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>PENTACHLOROANISOLE UNLABELED (1825-21-4 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>2,4,6-TRIBROMOANISOLE UNLABELED (607-99-8)</b>	
Persistence and degradability	Not available.
<b>2,4,5-TRIBROMOANISOLE UNLABELED (95970-10-8 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>2,4,6-TRIBROMOANISOLE (RING-<sup>13</sup>C<sub>6</sub>, 99%) (607-99-8 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>PENTABROMOANISOLE (13C<sub>6</sub>, 99%) (1825-26-9 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>PENTABROMOANISOLE UNLABELED (1825-26-9)</b>	
Persistence and degradability	Not available.
<b>2,4-DIBROMOANISOLE (RING-<sup>13</sup>C<sub>6</sub>, 99%) (21702-84-1 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>2,4-DIBROMOANISOLE UNLABELED (21702-84-1)</b>	
Persistence and degradability	Not available.
<b>6-METHOXY-2,2',4,4'-TETRABDE (RING-<sup>13</sup>C<sub>12</sub>, 99%) (102739-99-1 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>DIMETHYL TETRABROMOBISPHENOL A (RING-<sup>13</sup>C<sub>12</sub>, 99%) (37853-61-5 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,3,3',4',5-PENTACB UNLABELED (169295-14-1 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,3,3',4',5-PENTACB (13C<sub>12</sub>, 99%) (169295-14-1 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,2',3,4',5,5'-HEXACB UNLABELED (169295-19-6 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,2',3,4',5,5'-HEXACB (13C<sub>12</sub>, 99%) (169295-19-6 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,2',3,4'-TETRABDE UNLABELED (602326-25-0 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,2',3,4',5,5',6-HEPTACB UNLABELED (169295-23-2 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,2',3,4',5,5',6-HEPTACB (13C<sub>12</sub>, 99%) (1629523-2 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>3-METHOXY-2,2',4,4'-TETRABDE UNLABELED (602326-28-0 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>5-METHOXY-2,2',4,4'-TETRABDE UNLABELED (602326-19-2 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4'-METHOXY-2,2',4,5'-TETRABDE UNLABELED (476430-88-3 (Unlabeled))</b>	

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Persistence and degradability	Not available.
<b>5'-METHOXY-2,2',4,4',5-PENTABDE UNLABELED (923925-51-3 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>6-METHOXY-2,2',4,4',5-PENTABDE UNLABELED (497106-83-9 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>6'-METHOXY-2,2',4,4',6-PENTABDE (13C12, 99%) (1391119-70-2 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>1,2,3,4-TETRACHLORODIBENZO-P-DIOXIN (13C6, 99%) (30746-58-8 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>3,3',4,4'-TETRABDE (BDE-77) (13C12, 99%) (93703-48-1 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>2,2',3,4,4',6-HEXABDE (BDE-139) (13C12, 99%) (36483-60-0 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>2,4,5-TRIBROMOANISOLE (RING-13C6, 99%) (95970-10-8 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>12.3. Bioaccumulative potential</b>	
<b>EXTENDED PHENOLIC CALIBRATION SOLUTION CS4 (UNLABELED/<sup>13</sup>C, 99%)</b>	
Log Pow	5.65
Bioaccumulative potential	Not established.
<b>6-METHOXY-2,2',4,4'-TETRABDE UNLABELED (102739-99-1)</b>	
Bioaccumulative potential	Not available.
<b>DIMETHYL TETRABROMOBISPHENOL A UNLABELED (37853-61-5)</b>	
Bioaccumulative potential	Not available.
<b>METHYL TRICLOSAN (RING-13C12, 99%) (4640-01-1 (Unlabeled))</b>	
Log Pow	5.269
Bioaccumulative potential	Not available.
<b>METHYL TRICLOSAN UNLABELED (4640-01-1)</b>	
Log Pow	5.269
Bioaccumulative potential	Not available.
<b>PENTACHLOROANISOLE (13C6, 99%) (1825-21-4 (unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>N-NONANE UNLABELED (111-84-2 (Unlabeled))</b>	
Log Pow	5.65
Bioaccumulative potential	Indication of bioaccumulation.
<b>TOLUENE UNLABELED (108-88-3)</b>	
Bioaccumulative potential	Not available.
<b>PENTACHLOROANISOLE UNLABELED (1825-21-4 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>2,4-DIBROMOANISOLE (RING-13C6, 99%) (21702-84-1 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>2,4-DIBROMOANISOLE UNLABELED (21702-84-1)</b>	
Bioaccumulative potential	Not available.
<b>6-METHOXY-2,2',4,4'-TETRABDE (RING-13C12, 99%) (102739-99-1 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>DIMETHYL TETRABROMOBISPHENOL A (RING-13C12, 99%) (37853-61-5 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4-METHOXY-2,3,3',4',5-PENTACB UNLABELED (169295-14-1 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4-METHOXY-2,3,3',4',5-PENTACB (13C12, 99%) (169295-14-1 (Unlabeled))</b>	
Bioaccumulative potential	Not available.

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<b>4-METHOXY-2,2',3,4',5,5'-HEXACB UNLABELED (169295-19-6 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4-METHOXY-2,2',3,4',5,5'-HEXACB (13C12, 99%) (169295-19-6 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4-METHOXY-2,2',3,4'-TETRABDE UNLABELED (602326-25-0 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4-METHOXY-2,2',3,4',5,5',6-HEPTACB UNLABELED (169295-23-2 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4-METHOXY-2,2',3,4',5,5',6-HEPTACB (13C12, 99%) (1629523-2 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>3-METHOXY-2,2',4,4'-TETRABDE UNLABELED (602326-28-0 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>5-METHOXY-2,2',4,4'-TETRABDE UNLABELED (602326-19-2 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4'-METHOXY-2,2',4,5'-TETRABDE UNLABELED (476430-88-3 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>5'-METHOXY-2,2',4,4',5-PENTABDE UNLABELED (923925-51-3 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>6-METHOXY-2,2',4,4',5-PENTABDE UNLABELED (497106-83-9 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>6'-METHOXY-2,2',4,4',6-PENTABDE (13C12, 99%) (1391119-70-2 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>1,2,3,4-TETRACHLORODIBENZO-P-DIOXIN (13C6, 99%) (30746-58-8 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>3,3',4,4'-TETRABDE (BDE-77) (13C12, 99%) (93703-48-1 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>2,2',3,4,4',6-HEXABDE (BDE-139) (13C12, 99%) (36483-60-0 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>12.4. Mobility in soil</b>	
<b>6-METHOXY-2,2',4,4'-TETRABDE UNLABELED (102739-99-1)</b>	
Ecology - soil	Not available.
<b>DIMETHYL TETRABROMOBISPHENOL A UNLABELED (37853-61-5)</b>	
Ecology - soil	Not available.
<b>METHYL TRICLOSAN (RING-13C12, 99%) (4640-01-1 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>METHYL TRICLOSAN UNLABELED (4640-01-1)</b>	
Ecology - soil	Not available.
<b>PENTACHLOROANISOLE (13C6, 99%) (1825-21-4 (unlabeled))</b>	
Ecology - soil	Not available.
<b>N-NONANE UNLABELED (111-84-2 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>TOLUENE UNLABELED (108-88-3)</b>	
Ecology - soil	Not available.
<b>PENTACHLOROANISOLE UNLABELED (1825-21-4 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>2,4,6-TRIBROMOANISOLE UNLABELED (607-99-8)</b>	
Ecology - soil	Not available.
<b>2,4,5-TRIBROMOANISOLE UNLABELED (95970-10-8 (Unlabeled))</b>	
Ecology - soil	Not available.

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<b>2,4,6-TRIBROMOANISOLE (RING-13C6, 99%) (607-99-8 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>PENTABROMOANISOLE (13C6, 99%) (1825-26-9 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>PENTABROMOANISOLE UNLABELED (1825-26-9)</b>	
Ecology - soil	Not available.
<b>2,4-DIBROMOANISOLE (RING-13C6, 99%) (21702-84-1 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>2,4-DIBROMOANISOLE UNLABELED (21702-84-1)</b>	
Ecology - soil	Not available.
<b>6-METHOXY-2,2',4,4'-TETRABDE (RING-13C12, 99%) (102739-99-1 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>DIMETHYL TETRABROMOBISPHENOL A (RING-13C12, 99%) (37853-61-5 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,3,3',4',5-PENTACB UNLABELED (169295-14-1 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,3,3',4',5-PENTACB (13C12, 99%) (169295-14-1 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,2',3,4',5,5'-HEXACB UNLABELED (169295-19-6 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,2',3,4',5,5'-HEXACB (13C12, 99%) (169295-19-6 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,2',3,4'-TETRABDE UNLABELED (602326-25-0 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,2',3,4',5,5',6-HEPTACB UNLABELED (169295-23-2 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,2',3,4',5,5',6-HEPTACB (13C12, 99%) (1629523-2 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>3-METHOXY-2,2',4,4'-TETRABDE UNLABELED (602326-28-0 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>5-METHOXY-2,2',4,4'-TETRABDE UNLABELED (602326-19-2 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4'-METHOXY-2,2',4,5'-TETRABDE UNLABELED (476430-88-3 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>5'-METHOXY-2,2',4,4',5-PENTABDE UNLABELED (923925-51-3 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>6-METHOXY-2,2',4,4',5-PENTABDE UNLABELED (497106-83-9 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>6'-METHOXY-2,2',4,4',6-PENTABDE (13C12, 99%) (1391119-70-2 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>1,2,3,4-TETRACHLORODIBENZO-P-DIOXIN (13C6, 99%) (30746-58-8 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>3,3',4,4'-TETRABDE (BDE-77) (13C12, 99%) (93703-48-1 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>2,2',3,4,4',6-HEXABDE (BDE-139) (13C12, 99%) (36483-60-0 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>2,4,5-TRIBROMOANISOLE (RING-13C6, 99%) (95970-10-8 (Unlabeled))</b>	
Ecology - soil	Not available.

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### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

Other information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Regional legislation (waste) : Waste materials should be disposed of under conditions which meet Federal, State, and Local environmental control regulations.

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

### 14.1. UN number

UN-No.(DOT) : UN1920

### 14.2. UN proper shipping name

DOT Proper Shipping Name : Nonanes

Department of Transportation (DOT) Hazard Classes : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

Hazard labels (DOT) : 3 - Flammable liquid



Packing group (DOT) : III - Minor Danger

DOT Special Provisions (49 CFR 172.102) : B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then the bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has a flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable.

IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).

T2 - 1.5 178.274(d)(2) Normal..... 178.275(d)(3)

TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling =  $97 / 1 + a (tr - tf)$  Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.

DOT Packaging Exceptions (49 CFR 173.xxx) : 150

DOT Packaging Non Bulk (49 CFR 173.xxx) : 203

DOT Packaging Bulk (49 CFR 173.xxx) : 242

Marine pollutant : No

### 14.3. Additional information

Other information : No supplementary information available.



# EXTENDED PHENOLIC CALIBRATION SOLUTION CS4 (UNLABELED/13C, 99%) ES-5510-CS4

## Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### Overland transport

Packing group (ADR) : III  
Class (ADR) : 3 - Flammable liquid  
Hazard identification number (Kemler No.) : 30  
Classification code (ADR) : F1  
Danger labels (ADR) : 3 - Flammable liquids



Orange plates : 

Tunnel restriction code : D/E  
Limited quantities (ADR) : 5L  
EAC : 3Y  
Excepted quantities (ADR) : E1

### Transport by sea

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.  
MFAG-No : 128

### Air transport

DOT Quantity Limitations Passenger aircraft/rail : 60 L  
(49 CFR 173.27)  
DOT Quantity Limitations Cargo aircraft only (49 : 220 L  
CFR 175.75)

### 14.4. Environmental hazards

Other information : No supplementary information available.

### 14.5. Special precautions for user

### 14.6. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### N-NONANE UNLABELED (111-84-2 (Unlabeled))

SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard
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#### TOLUENE UNLABELED (108-88-3)

Listed on SARA Section 313 (Specific toxic chemical listings)	
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard

### 15.2. International regulations

#### CANADA

#### EXTENDED PHENOLIC CALIBRATION SOLUTION CS4 (UNLABELED/13C, 99%)

Listed on the Canadian DSL (Domestic Substances List) inventory.

#### TOLUENE UNLABELED (108-88-3)

Listed on the Canadian DSL (Domestic Substances List) inventory.

# EXTENDED PHENOLIC CALIBRATION SOLUTION CS4 (UNLABELED/<sup>13</sup>C, 99%) ES-5510-CS4

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### 15.2.1. National regulations

No additional information available

### 15.3. US State regulations

#### N-NONANE UNLABELED (111-84-2 (Unlabeled))

U.S. - Massachusetts - Right To Know List  
U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

#### TOLUENE UNLABELED (108-88-3)

U.S. - Massachusetts - Right To Know List  
U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
WARNING! This product contains a chemical known by the state of California to cause birth defects or other reproductive harm.

## SECTION 16: Other information

Other information : None.

# EXTENDED PHENOLIC CALIBRATION SOLUTION CS4 (UNLABELED/<sup>13</sup>C, 99%) ES-5510-CS4

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Full text of R-, H- and EUH-phrases::

Acute Tox. 1 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 1
Acute Tox. 2 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 2
Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Aquatic Chronic 4	Hazardous to the aquatic environment - Chronic Hazard Category 4
Asp. Tox. 1	Aspiration hazard Category 1
Carc. 1A	Carcinogenicity Category 1A
Carc. 2	Carcinogenicity Category 2
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Flam. Liq. 2	Flammable liquids Category 2
Flam. Liq. 3	Flammable liquids Category 3
Repr. 2	Reproductive toxicity Category 2
Skin Irrit. 2	skin corrosion/irritation Category 2
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
STOT SE 2	Specific target organ toxicity (single exposure) Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H225	Highly flammable liquid and vapor
H226	Flammable liquid and vapor
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H312	Harmful in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H330	Fatal if inhaled
H332	Harmful if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H350	May cause cancer
H351	Suspected of causing cancer
H361d	Suspected of damaging the unborn child
H371	May cause damage to organs
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H413	May cause long lasting harmful effects to aquatic life
R10	Flammable
R11	Highly flammable
R20	Harmful by inhalation
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed
R21	Harmful in contact with skin
R22	Harmful if swallowed
R23	Toxic by inhalation
R36/37/38	Irritating to eyes, respiratory system and skin
R36/38	Irritating to eyes and skin
R40	Limited evidence of a carcinogenic effect
R45	May cause cancer
R48/20/21/22	Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed
R48/21/22	Harmful: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed
R49	May cause cancer by inhalation
R50	Very toxic to aquatic organisms
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R51	Toxic to aquatic organisms
R53	May cause long-term adverse effects in the aquatic environment
R62	Possible risk of impaired fertility
R63	Possible risk of harm to the unborn child

# EXTENDED PHENOLIC CALIBRATION SOLUTION CS4 (UNLABELED/<sup>13</sup>C, 99%) ES-5510-CS4

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R65	Harmful: may cause lung damage if swallowed
R67	Vapors may cause drowsiness and dizziness
F	Highly flammable
N	Dangerous for the environment
T	Toxic
Xi	Irritant
Xn	Harmful

CIL Multi-Solvent Mixture SDS

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*



# EXTENDED PHENOLIC CALIBRATION SOLUTION CS5 (UNLABELED/<sup>13</sup>C, 99%)

## Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 25/06/2014

Revision date:

:

Version: 1.0

**ES-5510-CS5**

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

Product form : Mixtures  
Product name. : EXTENDED PHENOLIC CALIBRATION SOLUTION CS5 (UNLABELED/<sup>13</sup>C, 99%)  
Product code : ES-5510-CS5

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### 1.2.1. Relevant identified uses

Industrial/Professional use spec : For professional use only.  
Industrial.

#### 1.2.2. Uses advised against

No additional information available

### 1.3. Details of the supplier of the safety data sheet

Cambridge Isotope Laboratories, Inc.  
50 Frontage Road  
Andover, MA 01810  
USA

USA: 1-800-322-1174 Int: 1-978-749-8000  
[cilsales@isotope.com](mailto:cilsales@isotope.com) [www.isotope.com](http://www.isotope.com)

### Emergency telephone number

Emergency numbers:

Chemtrec: 1-800-424-9300 (24 hours)  
International: 1-202-483-7616 (24 hours)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 2	H225
Skin Irrit. 2	H315
Eye Irrit. 2	H319
Carc. 2	H351
STOT SE 3	H336
Repr. 2	H361d

Full text of H-phrases: see section 16

#### Classification according to Directive 67/548/EEC or 1999/45/EC

Carc.Cat.3; R40  
F; R11  
Xn; R20  
Xn; R65

Full text of R-phrases: see section 16

#### Classification (GHS-US)

Flam. Liq. 2	H225
Skin Irrit. 2	H315
Eye Irrit. 2A	H319
Carc. 2	H351
Repr. 2	H361
STOT SE 3	H336
Aquatic Acute 2	H401

#### Adverse physicochemical, human health and environmental effects

No additional information available

# EXTENDED PHENOLIC CALIBRATION SOLUTION CS5 (UNLABELED/<sup>13</sup>C, 99%) ES-5510-CS5

## Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 2.2. Label elements

#### Labeling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



Signal word (CLP)

Hazardous ingredients

Hazard statements (CLP)

Precautionary statements (CLP)

- : Danger
- : TOLUENE UNLABELED
- : H225 - Highly flammable liquid and vapor  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H336 - May cause drowsiness or dizziness  
H351 - Suspected of causing cancer  
H361 - Suspected of damaging the unborn child
- : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
P233 - Keep container tightly closed  
P240 - Ground/bond container and receiving equipment  
P241 - Use explosion-proof electrical, lighting, ventilating equipment  
P261 - Avoid breathing dust, fume, gas, mist, spray, vapors  
P264 - Wash Both hands thoroughly after handling  
P271 - Use only outdoors or in a well-ventilated area  
P280 - Wear protective clothing, protective gloves

#### GHS-US labeling

Hazard pictograms (GHS-US)



Signal word (GHS-US)

Hazard statements (GHS-US)

Precautionary statements (GHS-US)

- : Danger
- : H225 - Highly flammable liquid and vapor  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H336 - May cause drowsiness or dizziness  
H351 - Suspected of causing cancer (Dermal, Inhalation, oral)  
H361 - Suspected of damaging fertility or the unborn child (Dermal, oral, Inhalation)  
H401 - Toxic to aquatic life
- : P201 - Obtain special instructions before use  
P202 - Do not handle until all safety precautions have been read and understood  
P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking  
P233 - Keep container tightly closed  
P240 - Ground/bond container and receiving equipment  
P241 - Use explosion-proof electrical, lighting, ventilating equipment  
P242 - Use only non-sparking tools  
P243 - Take precautionary measures against static discharge  
P261 - Avoid breathing dust, fume, gas, mist, spray, vapors  
P264 - Wash Both hands thoroughly after handling  
P271 - Use only outdoors or in a well-ventilated area  
P273 - Avoid release to the environment  
P280 - Wear protective clothing, protective gloves  
P302+P352 - IF ON SKIN: Wash with plenty of soap and water  
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P308+P313 - IF exposed or concerned: Get medical advice/attention  
P312 - Call a POISON CENTER/doctor/physician if you feel unwell  
P321 - Specific treatment (see Hazard pictograms (CLP) on this label)  
P332+P313 - If skin irritation occurs: Get medical advice/attention

# EXTENDED PHENOLIC CALIBRATION SOLUTION CS5 (UNLABELED/13C, 99%) ES-5510-CS5

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according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

P337+P313 - If eye irritation persists: Get medical advice/attention  
P362 - Take off contaminated clothing and wash before reuse  
P370+P378 - In case of fire: Use Carbon dioxide., Dry chemical., Alcohol resistant foam., Water spray for extinction  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed  
P403+P235 - Store in a well-ventilated place. Keep cool  
P405 - Store locked up  
P501 - Dispose of contents/container to Comply with applicable regulations.

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

# EXTENDED PHENOLIC CALIBRATION SOLUTION CS5 (UNLABELED/<sup>13</sup>C, 99%) ES-5510-CS5

## Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 3.2. Mixtures

Name	Product identifier	%	Classification according to Directive 67/548/EEC
N-NONANE UNLABELED	(CAS No)111-84-2 (Unlabeled) (EC no)203-913-4	95.6366594	R10 Xn; R20 Xn; R65 R67
TOLUENE UNLABELED	(CAS No)108-88-3 (EC no)203-625-9 (EC index no)601-021-00-3	4.36237854	Repr.Cat.3; R62 Repr.Cat.3; R63 F; R11 Xi; R36/38 Carc.Cat.3; R40 N; R51 Xn; R20 R67 Xn; R65
PENTACHLOROANISOLE UNLABELED	(CAS No)1825-21-4 (Unlabeled)	0.00014552	Xn; R22 N; R50/53
METHYL TRICLOSAN (RING-13C12, 99%)	(CAS No)4640-01-1 (Unlabeled)	0.00014539	Xn; R20/21/22 N; R50/53
METHYL TRICLOSAN UNLABELED	(CAS No)4640-01-1	0.00014494	Xn; R20/21/22 N; R50/53
PENTACHLOROANISOLE (13C6, 99%)	(CAS No)1825-21-4 (unlabeled)	0.00014468	Xn; R22 N; R50/53
2,4-DIBROMOANISOLE UNLABELED	(CAS No)21702-84-1 (EC no)244-536-5	0.00001459	Xi; R36/37/38
2,4-DIBROMOANISOLE (RING-13C6, 99%)	(CAS No)21702-84-1 (Unlabeled) (EC no)244-536-5	0.00001458	Xi; R36/37/38
2,4,6-TRIBROMOANISOLE UNLABELED	(CAS No)607-99-8	0.00001441	R53
2,4,5-TRIBROMOANISOLE UNLABELED	(CAS No)95970-10-8 (Unlabeled)	0.00001441	R53
2,4,5-TRIBROMOANISOLE (RING-13C6, 99%)	(CAS No)95970-10-8 (Unlabeled)	0.0000144	R53
2,4,6-TRIBROMOANISOLE (RING-13C6, 99%)	(CAS No)607-99-8 (Unlabeled)	0.0000144	R53
4-METHOXY-2,3,3',4',5'-PENTACB UNLABELED	(CAS No)169295-14-1 (Unlabeled) (EC index no)602-039-00-4	0.0000144	Xn; R48/20/21/22 N; R50/53
4-METHOXY-2,3,3',4',5'-PENTACB (13C12, 99%)	(CAS No)169295-14-1 (Unlabeled) (EC index no)602-039-00-4	0.00001437	Xn; R48/20/21/22 N; R50/53
4-METHOXY-2,2',3,4',5,5'-HEXACB UNLABELED	(CAS No)169295-19-6 (Unlabeled) (EC index no)602-039-00-4	0.00001434	Xn; R48/20/21/22 N; R50/53
4-METHOXY-2,2',3,4',5,5'-HEXACB (13C12, 99%)	(CAS No)169295-19-6 (Unlabeled) (EC index no)602-039-00-4	0.00001433	Xn; R48/20/21/22 N; R50/53
4-METHOXY-2,2',3,4',5,5',6-HEPTACB UNLABELED	(CAS No)169295-23-2 (Unlabeled) (EC index no)602-039-00-4	0.0000143	Xn; R48/20/21/22 N; R50/53
4-METHOXY-2,2',3,4',5,5',6-HEPTACB (13C12, 99%)	(CAS No)1629523-2 (Unlabeled) (EC index no)602-039-00-4	0.00001428	Xn; R48/20/21/22 N; R50/53
PENTABROMOANISOLE (13C6, 99%)	(CAS No)1825-26-9 (Unlabeled)	0.00001422	R53
PENTABROMOANISOLE UNLABELED	(CAS No)1825-26-9	0.00001422	R53
6-METHOXY-2,2',4,4'-TETRABDE UNLABELED	(CAS No)102739-99-1	0.00001421	T; R23 Xn; R22 Xi; R36/37/38
4-METHOXY-2,2',3,4'-TETRABDE UNLABELED	(CAS No)602326-25-0 (Unlabeled)	0.00001421	Xn; R48/21/22 N; R50/53
3-METHOXY-2,2',4,4'-TETRABDE UNLABELED	(CAS No)602326-28-0 (Unlabeled)	0.00001421	Xn; R20/21/22 N; R50/53



# EXTENDED PHENOLIC CALIBRATION SOLUTION CS5 (UNLABELED/<sup>13</sup>C, 99%) ES-5510-CS5

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Name	Product identifier	%	Classification according to Directive 67/548/EEC
5-METHOXY-2,2',4,4'-TETRABDE UNLABELED	(CAS No)602326-19-2 (Unlabeled)	0.00001421	Xn; R20/21/22 N; R50/53
4'-METHOXY-2,2',4,5'-TETRABDE UNLABELED	(CAS No)476430-88-3 (Unlabeled)	0.00001421	Xn; R20/21/22 Xi; R36/37/38
6-METHOXY-2,2',4,4'-TETRABDE (RING- <sup>13</sup> C12, 99%)	(CAS No)102739-99-1 (Unlabeled)	0.0000142	T; R23 Xn; R22 Xi; R36/37/38
5'-METHOXY-2,2',4,4',5-PENTABDE UNLABELED	(CAS No)923925-51-3 (Unlabeled)	0.00001416	Carc.Cat.1; R45 Carc.Cat.1; R49 Xn; R20 Xn; R21 Xn; R22 N; R50
6-METHOXY-2,2',4,4',5-PENTABDE UNLABELED	(CAS No)497106-83-9 (Unlabeled)	0.00001416	Carc.Cat.1; R45 Carc.Cat.1; R49 Xn; R20 Xn; R21 Xn; R22 N; R50
6'-METHOXY-2,2',4,4',6-PENTABDE ( <sup>13</sup> C12, 99%)	(CAS No)1391119-70-2 (Unlabeled)	0.00001415	Xn; R20/21/22 Xi; R36/37/38
2,2',3,3',4,5,5',6,6'-NONACB (PCB-208) ( <sup>13</sup> C12, 99%)	(CAS No)52663-77-1 (Unlabeled)	0.00001382	Not classified
3,3',4,4'-TETRABDE (BDE-77) ( <sup>13</sup> C12, 99%)	(CAS No)93703-48-1 (Unlabeled)	0.00001037	Xn; R20/21/22 Xi; R36/37/38
2,2',3,4,4',6-HEXABDE (BDE-139) ( <sup>13</sup> C12, 99%)	(CAS No)36483-60-0 (Unlabeled)	0.00001037	Xn; R20/21/22 Xi; R36/37/38
DIMETHYL TETRABROMOBISPHENOL A (RING- <sup>13</sup> C12, 99%)	(CAS No)37853-61-5 (Unlabeled) (EC no)201-236-9	0.00000727	Xi; R36/37/38 N; R50
DIMETHYL TETRABROMOBISPHENOL A UNLABELED	(CAS No)37853-61-5 (EC no)201-236-9	0.00000726	Xi; R36/37/38 N; R50
1,2,3,4-TETRACHLORODIBENZO-P-DIOXIN ( <sup>13</sup> C6, 99%)	(CAS No)30746-58-8 (Unlabeled)	0.00000346	Carc.Cat.1; R45 Carc.Cat.1; R49 Xn; R20 Xn; R21 Xn; R22

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
N-NONANE UNLABELED	(CAS No)111-84-2 (Unlabeled) (EC no)203-913-4	95.6366594	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H336 Asp. Tox. 1, H304
TOLUENE UNLABELED	(CAS No)108-88-3 (EC no)203-625-9 (EC index no)601-021-00-3	4.36237854	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Carc. 2, H351 Repr. 2, H361d STOT SE 3, H336 STOT SE 2, H371 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Acute 1, H400
PENTACHLOROANISOLE UNLABELED	(CAS No)1825-21-4 (Unlabeled)	0.00014552	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
METHYL TRICLOSAN (RING- <sup>13</sup> C12, 99%)	(CAS No)4640-01-1 (Unlabeled)	0.00014539	Aquatic Acute 1, H400
METHYL TRICLOSAN UNLABELED	(CAS No)4640-01-1	0.00014494	Aquatic Acute 1, H400
PENTACHLOROANISOLE ( <sup>13</sup> C6, 99%)	(CAS No)1825-21-4 (unlabeled)	0.00014468	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

# EXTENDED PHENOLIC CALIBRATION SOLUTION CS5 (UNLABELED/<sup>13</sup>C, 99%) ES-5510-CS5

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2,4-DIBROMOANISOLE UNLABELED	(CAS No)21702-84-1 (EC no)244-536-5	0.00001459	Skin Irrit. 2, H315
2,4-DIBROMOANISOLE (RING-13C6, 99%)	(CAS No)21702-84-1 (Unlabeled) (EC no)244-536-5	0.00001458	Skin Irrit. 2, H315
2,4,6-TRIBROMOANISOLE UNLABELED	(CAS No)607-99-8	0.00001441	Aquatic Chronic 4, H413
2,4,5-TRIBROMOANISOLE UNLABELED	(CAS No)95970-10-8 (Unlabeled)	0.00001441	Aquatic Chronic 4, H413
2,4,5-TRIBROMOANISOLE (RING-13C6, 99%)	(CAS No)95970-10-8 (Unlabeled)	0.0000144	Aquatic Chronic 4, H413
2,4,6-TRIBROMOANISOLE (RING-13C6, 99%)	(CAS No)607-99-8 (Unlabeled)	0.0000144	Aquatic Chronic 4, H413
4-METHOXY-2,3,3',4',5-PENTACB UNLABELED	(CAS No)169295-14-1 (Unlabeled) (EC index no)602-039-00-4	0.0000144	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
4-METHOXY-2,3,3',4',5-PENTACB (13C12, 99%)	(CAS No)169295-14-1 (Unlabeled) (EC index no)602-039-00-4	0.00001437	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
4-METHOXY-2,2',3,4',5,5'-HEXACB UNLABELED	(CAS No)169295-19-6 (Unlabeled) (EC index no)602-039-00-4	0.00001434	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
4-METHOXY-2,2',3,4',5,5'-HEXACB (13C12, 99%)	(CAS No)169295-19-6 (Unlabeled) (EC index no)602-039-00-4	0.00001433	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
4-METHOXY-2,2',3,4',5,5',6-HEPTACB UNLABELED	(CAS No)169295-23-2 (Unlabeled) (EC index no)602-039-00-4	0.0000143	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
4-METHOXY-2,2',3,4',5,5',6-HEPTACB (13C12, 99%)	(CAS No)1629523-2 (Unlabeled) (EC index no)602-039-00-4	0.00001428	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
PENTABROMOANISOLE (13C6, 99%)	(CAS No)1825-26-9 (Unlabeled)	0.00001422	Aquatic Chronic 4, H413
PENTABROMOANISOLE UNLABELED	(CAS No)1825-26-9	0.00001422	Aquatic Chronic 4, H413
6-METHOXY-2,2',4,4'-TETRABDE UNLABELED	(CAS No)102739-99-1	0.00001421	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Acute Tox. 2 (Inhalation:vapour), H330 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
4-METHOXY-2,2',3,4'-TETRABDE UNLABELED	(CAS No)602326-25-0 (Unlabeled)	0.00001421	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 STOT SE 2, H371 Aquatic Chronic 1, H410
3-METHOXY-2,2',4,4'-TETRABDE UNLABELED	(CAS No)602326-28-0 (Unlabeled)	0.00001421	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312
5-METHOXY-2,2',4,4'-TETRABDE UNLABELED	(CAS No)602326-19-2 (Unlabeled)	0.00001421	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312
4'-METHOXY-2,2',4,5'-TETRABDE UNLABELED	(CAS No)476430-88-3 (Unlabeled)	0.00001421	Not classified
6-METHOXY-2,2',4,4'-TETRABDE (RING-13C12, 99%)	(CAS No)102739-99-1 (Unlabeled)	0.0000142	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Acute Tox. 1 (Inhalation:vapour), H330 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
5'-METHOXY-2,2',4,4',5-PENTABDE UNLABELED	(CAS No)923925-51-3 (Unlabeled)	0.00001416	Carc. 1A, H350 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312 Aquatic Acute 1, H400
6-METHOXY-2,2',4,4',5-PENTABDE UNLABELED	(CAS No)497106-83-9 (Unlabeled)	0.00001416	Carc. 1A, H350 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312 Aquatic Acute 1, H400
6'-METHOXY-2,2',4,4',6-PENTABDE (13C12, 99%)	(CAS No)1391119-70-2 (Unlabeled)	0.00001415	Not classified
2,2',3,3',4,5,5',6,6'-NONACB (PCB-208) (13C12, 99%)	(CAS No)52663-77-1 (Unlabeled)	0.00001382	Not classified
3,3',4,4'-TETRABDE (BDE-77) (13C12, 99%)	(CAS No)93703-48-1 (Unlabeled)	0.00001037	Not classified
2,2',3,4,4',6-HEXABDE (BDE-139) (13C12, 99%)	(CAS No)36483-60-0 (Unlabeled)	0.00001037	Not classified
DIMETHYL TETRABROMOBISPHENOL A (RING-13C12, 99%)	(CAS No)37853-61-5 (Unlabeled) (EC no)201-236-9	0.00000727	Skin Irrit. 2, H315 STOT SE 3, H336 Aquatic Acute 1, H400

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
DIMETHYL TETRABROMOBISPHENOL A UNLABELED	(CAS No)37853-61-5 (EC no)201-236-9	0.00000726	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 1, H400 (M=10)
1,2,3,4-TETRACHLORODIBENZO-P-DIOXIN (13C6, 99%)	(CAS No)30746-58-8 (Unlabeled)	0.00000346	Carc. 1A, H350 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312

Name	Product identifier	%	Classification (GHS-US)
N-NONANE UNLABELED	(CAS No)111-84-2 (Unlabeled)	95.6366594	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H336 Asp. Tox. 1, H304
TOLUENE UNLABELED	(CAS No)108-88-3	4.36237854	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Carc. 2, H351 Repr. 2, H361 STOT SE 3, H336 STOT SE 2, H371 Asp. Tox. 1, H304 Aquatic Acute 1, H400

Full text of R-, H- and EUH-phrases: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Assure fresh air breathing. Allow the victim to rest.
- First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

### 4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

- suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

No additional information available

### 5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

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### 6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.  
Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store at room temperature away from light and moisture.  
Incompatible products : Strong bases. strong acids.  
Incompatible materials : Sources of ignition. Direct sunlight.

### 7.3. Specific end use(s)

No additional information available

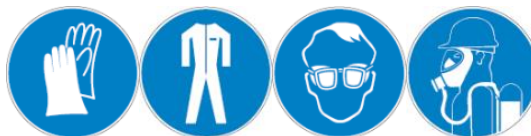
## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

N-NONANE UNLABELED (111-84-2 (Unlabeled))		
Italy - Portugal- USA ACGIH	ACGIH TWA (ppm)	200.0000000000 ppm Central Nervous System impairment.
TOLUENE UNLABELED (108-88-3)		
Italy - Portugal- USA ACGIH	ACGIH TWA (ppm)	20.0000000000 ppm Visual impairment, Female reproductive, Pregnancy loss
USA OSHA	OSHA PEL (TWA) (ppm)	100.0000000000 ppm USA. OSHA - TABLE Z-1 Limits for Air Contaminants 1910.1000
USA OSHA	OSHA PEL (STEL) (ppm)	150.0000000000 ppm USA. OSHA - TABLE Z-1 Limits for Air Contaminants 1910.1000

### 8.2. Exposure controls

Personal protective equipment : Avoid all unnecessary exposure. Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus.



Hand protection : Wear protective gloves.  
Eye protection : Chemical goggles or safety glasses.  
Respiratory protection : Wear approved mask.  
Other information : When using, do not eat, drink or smoke.

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### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid.
Color	: Colorless.
Odor	: characteristic.
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: -53 °C (- 63 °F) - lit
Freezing point	: No data available
Boiling point	: 151 °C (304 °F) - lit
Flash point	: 31.0 °C (87.8 °F) - closed cup
Self ignition temperature	: 205 °C (401 °F)
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: 12.4 hPa (9.3 mmHg) at 37.7 °C (99.9 °F)
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: Water: 0 %
Log Pow	: 5.65
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: 0.87 - 2.9 % (V)

#### 9.2. Other information

No additional information available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No additional information available

#### 10.2. Chemical stability

See storage and expiration date on CoA.

#### 10.3. Possibility of hazardous reactions

Not established.

#### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

#### 10.5. Incompatible materials

strong acids. Strong bases.

#### 10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Not classified

#### 6-METHOXY-2,2',4,4'-TETRABDE UNLABELED (102739-99-1)

ATE (oral)	500.000 mg/kg body weight
ATE (vapors)	0.500 mg/l/4h

#### N-NONANE UNLABELED (111-84-2 (Unlabeled))

LC50 inhalation rat (ppm)	3200 ppm/4h
ATE (dust, mist)	1.500 mg/l/4h

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<b>TOLUENE UNLABELED (108-88-3)</b>	
LD50 oral rat	> 5580 mg/kg
LD50 dermal rabbit	12196 mg/kg
LC50 inhalation rat (mg/l)	12500 - 28800 mg/m <sup>3</sup> 4 h
ATE (dermal)	12196.000 mg/kg body weight
ATE (gases)	4500.000 ppmV/4h
ATE (vapors)	12.500 mg/l/4h
ATE (dust, mist)	1.500 mg/l/4h

<b>6-METHOXY-2,2',4,4'-TETRABDE (RING-13C12, 99%) (102739-99-1 (Unlabeled))</b>	
ATE (oral)	500.000 mg/kg body weight
ATE (vapors)	0.050 mg/l/4h

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Suspected of causing cancer.
Reproductive toxicity	: Suspected of damaging the unborn child.
Specific target organ toxicity (single exposure)	: May cause drowsiness or dizziness.
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

### 12.1. Toxicity

<b>DIMETHYL TETRABROMOBISPHENOL A UNLABELED (37853-61-5)</b>	
LC50 fish 1	0.06 mg/l Pimephales promelas (fathead minnow) - 96 h
EC50 Daphnia 1	7.9 mg/l Daphnia magna (Water flea) - 48 h

<b>PENTACHLOROANISOLE (13C6, 99%) (1825-21-4 (unlabeled))</b>	
LC50 fish 1	0.65 mg/l Pimephales promelas (fathead minnow) - 96 h
EC50 Daphnia 1	0.027 mg/l Daphnia magna (Water flea) - 48 h

<b>TOLUENE UNLABELED (108-88-3)</b>	
LC50 fish 1	74 - 340 mg/l Lepomis macrochirus (Bluegill) - 96h
LC50 other aquatic organisms 1	10 mg/l Pseudokirchneriella subcapitata (Green algae) - 24 h
EC50 Daphnia 1	8 mg/l Daphnia magna (Water flea) - 24h
LC50 fish 2	7.63 mg/l Oncorhynchus mykiss (Rainbow trout) - 96 h
EC50 Daphnia 2	6 mg/l Daphnia magna (Water flea) - Immobilization - 48 h
ErC50 (algae)	245 mg/l Chlorella vulgaris (Fresh water algae) - 24 h
LOEC (chronic)	8.04 mg/l Pimephales promelas (Fathead minnow) - 7 d
NOEC (chronic)	5.44 mg/l Pimephales promelas (fathead minnow) - 7 d

<b>PENTACHLOROANISOLE UNLABELED (1825-21-4 (Unlabeled))</b>	
LC50 fish 1	0.65 mg/l Pimephales promelas (fathead minnow) - 96 h
EC50 Daphnia 1	0.027 mg/l Daphnia magna (Water flea) - 48 h

<b>DIMETHYL TETRABROMOBISPHENOL A (RING-13C12, 99%) (37853-61-5 (Unlabeled))</b>	
LC50 fish 1	0.06 mg/l Pimephales promelas (fathead minnow) - 96 h
EC50 Daphnia 1	7.9 mg/l Daphnia magna (Water flea) - 48 h

### 12.2. Persistence and degradability

<b>EXTENDED PHENOLIC CALIBRATION SOLUTION CS5 (UNLABELED/<sup>13</sup>C, 99%)</b>	
Persistence and degradability	Not established.

<b>6-METHOXY-2,2',4,4'-TETRABDE UNLABELED (102739-99-1)</b>	
Persistence and degradability	Not available.

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<b>DIMETHYL TETRABROMOBISPHENOL A UNLABELED (37853-61-5)</b>	
Persistence and degradability	Not available.
<b>METHYL TRICLOSAN (RING-<sup>13</sup>C<sub>12</sub>, 99%) (4640-01-1 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>METHYL TRICLOSAN UNLABELED (4640-01-1)</b>	
Persistence and degradability	Not available.
<b>PENTACHLOROANISOLE (13C<sub>6</sub>, 99%) (1825-21-4 (unlabeled))</b>	
Persistence and degradability	Not available.
<b>N-NONANE UNLABELED (111-84-2 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>PENTACHLOROANISOLE UNLABELED (1825-21-4 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>2,4,6-TRIBROMOANISOLE UNLABELED (607-99-8)</b>	
Persistence and degradability	Not available.
<b>2,4,5-TRIBROMOANISOLE UNLABELED (95970-10-8 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>2,4,6-TRIBROMOANISOLE (RING-<sup>13</sup>C<sub>6</sub>, 99%) (607-99-8 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>PENTABROMOANISOLE (13C<sub>6</sub>, 99%) (1825-26-9 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>PENTABROMOANISOLE UNLABELED (1825-26-9)</b>	
Persistence and degradability	Not available.
<b>2,4-DIBROMOANISOLE (RING-<sup>13</sup>C<sub>6</sub>, 99%) (21702-84-1 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>2,4-DIBROMOANISOLE UNLABELED (21702-84-1)</b>	
Persistence and degradability	Not available.
<b>6-METHOXY-2,2',4,4'-TETRABDE (RING-<sup>13</sup>C<sub>12</sub>, 99%) (102739-99-1 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>DIMETHYL TETRABROMOBISPHENOL A (RING-<sup>13</sup>C<sub>12</sub>, 99%) (37853-61-5 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,3,3',4',5-PENTACB UNLABELED (169295-14-1 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,3,3',4',5-PENTACB (13C<sub>12</sub>, 99%) (169295-14-1 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,2',3,4',5,5'-HEXACB UNLABELED (169295-19-6 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,2',3,4',5,5'-HEXACB (13C<sub>12</sub>, 99%) (169295-19-6 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,2',3,4'-TETRABDE UNLABELED (602326-25-0 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,2',3,4',5,5',6-HEPTACB UNLABELED (169295-23-2 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,2',3,4',5,5',6-HEPTACB (13C<sub>12</sub>, 99%) (1629523-2 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>3-METHOXY-2,2',4,4'-TETRABDE UNLABELED (602326-28-0 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>5-METHOXY-2,2',4,4'-TETRABDE UNLABELED (602326-19-2 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4'-METHOXY-2,2',4,5'-TETRABDE UNLABELED (476430-88-3 (Unlabeled))</b>	

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Persistence and degradability	Not available.
<b>5'-METHOXY-2,2',4,4',5-PENTABDE UNLABELED (923925-51-3 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>6-METHOXY-2,2',4,4',5-PENTABDE UNLABELED (497106-83-9 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>6'-METHOXY-2,2',4,4',6-PENTABDE (13C12, 99%) (1391119-70-2 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>1,2,3,4-TETRACHLORODIBENZO-P-DIOXIN (13C6, 99%) (30746-58-8 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>3,3',4,4'-TETRABDE (BDE-77) (13C12, 99%) (93703-48-1 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>2,2',3,4,4',6-HEXABDE (BDE-139) (13C12, 99%) (36483-60-0 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>2,4,5-TRIBROMOANISOLE (RING-13C6, 99%) (95970-10-8 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>12.3. Bioaccumulative potential</b>	
<b>EXTENDED PHENOLIC CALIBRATION SOLUTION CS5 (UNLABELED/13C, 99%)</b>	
Log Pow	5.65
Bioaccumulative potential	Not established.
<b>6-METHOXY-2,2',4,4'-TETRABDE UNLABELED (102739-99-1)</b>	
Bioaccumulative potential	Not available.
<b>DIMETHYL TETRABROMOBISPHENOL A UNLABELED (37853-61-5)</b>	
Bioaccumulative potential	Not available.
<b>METHYL TRICLOSAN (RING-13C12, 99%) (4640-01-1 (Unlabeled))</b>	
Log Pow	5.269
Bioaccumulative potential	Not available.
<b>METHYL TRICLOSAN UNLABELED (4640-01-1)</b>	
Log Pow	5.269
Bioaccumulative potential	Not available.
<b>PENTACHLOROANISOLE (13C6, 99%) (1825-21-4 (unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>N-NONANE UNLABELED (111-84-2 (Unlabeled))</b>	
Log Pow	5.65
Bioaccumulative potential	Indication of bioaccumulation.
<b>TOLUENE UNLABELED (108-88-3)</b>	
Bioaccumulative potential	Not available.
<b>PENTACHLOROANISOLE UNLABELED (1825-21-4 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>2,4-DIBROMOANISOLE (RING-13C6, 99%) (21702-84-1 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>2,4-DIBROMOANISOLE UNLABELED (21702-84-1)</b>	
Bioaccumulative potential	Not available.
<b>6-METHOXY-2,2',4,4'-TETRABDE (RING-13C12, 99%) (102739-99-1 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>DIMETHYL TETRABROMOBISPHENOL A (RING-13C12, 99%) (37853-61-5 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4-METHOXY-2,3,3',4',5-PENTACB UNLABELED (169295-14-1 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4-METHOXY-2,3,3',4',5-PENTACB (13C12, 99%) (169295-14-1 (Unlabeled))</b>	
Bioaccumulative potential	Not available.



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<b>4-METHOXY-2,2',3,4',5,5'-HEXACB UNLABELED (169295-19-6 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4-METHOXY-2,2',3,4',5,5'-HEXACB (13C12, 99%) (169295-19-6 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4-METHOXY-2,2',3,4'-TETRABDE UNLABELED (602326-25-0 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4-METHOXY-2,2',3,4',5,5',6-HEPTACB UNLABELED (169295-23-2 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4-METHOXY-2,2',3,4',5,5',6-HEPTACB (13C12, 99%) (1629523-2 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>3-METHOXY-2,2',4,4'-TETRABDE UNLABELED (602326-28-0 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>5-METHOXY-2,2',4,4'-TETRABDE UNLABELED (602326-19-2 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4'-METHOXY-2,2',4,5'-TETRABDE UNLABELED (476430-88-3 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>5'-METHOXY-2,2',4,4',5-PENTABDE UNLABELED (923925-51-3 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>6-METHOXY-2,2',4,4',5-PENTABDE UNLABELED (497106-83-9 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>6'-METHOXY-2,2',4,4',6-PENTABDE (13C12, 99%) (1391119-70-2 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>1,2,3,4-TETRACHLORODIBENZO-P-DIOXIN (13C6, 99%) (30746-58-8 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>3,3',4,4'-TETRABDE (BDE-77) (13C12, 99%) (93703-48-1 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>2,2',3,4,4',6-HEXABDE (BDE-139) (13C12, 99%) (36483-60-0 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>12.4. Mobility in soil</b>	
<b>6-METHOXY-2,2',4,4'-TETRABDE UNLABELED (102739-99-1)</b>	
Ecology - soil	Not available.
<b>DIMETHYL TETRABROMOBISPHENOL A UNLABELED (37853-61-5)</b>	
Ecology - soil	Not available.
<b>METHYL TRICLOSAN (RING-13C12, 99%) (4640-01-1 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>METHYL TRICLOSAN UNLABELED (4640-01-1)</b>	
Ecology - soil	Not available.
<b>PENTACHLOROANISOLE (13C6, 99%) (1825-21-4 (unlabeled))</b>	
Ecology - soil	Not available.
<b>N-NONANE UNLABELED (111-84-2 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>TOLUENE UNLABELED (108-88-3)</b>	
Ecology - soil	Not available.
<b>PENTACHLOROANISOLE UNLABELED (1825-21-4 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>2,4,6-TRIBROMOANISOLE UNLABELED (607-99-8)</b>	
Ecology - soil	Not available.
<b>2,4,5-TRIBROMOANISOLE UNLABELED (95970-10-8 (Unlabeled))</b>	
Ecology - soil	Not available.

# EXTENDED PHENOLIC CALIBRATION SOLUTION CS5 (UNLABELED/13C, 99%) ES-5510-CS5

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<b>2,4,6-TRIBROMOANISOLE (RING-13C6, 99%) (607-99-8 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>PENTABROMOANISOLE (13C6, 99%) (1825-26-9 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>PENTABROMOANISOLE UNLABELED (1825-26-9)</b>	
Ecology - soil	Not available.
<b>2,4-DIBROMOANISOLE (RING-13C6, 99%) (21702-84-1 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>2,4-DIBROMOANISOLE UNLABELED (21702-84-1)</b>	
Ecology - soil	Not available.
<b>6-METHOXY-2,2',4,4'-TETRABDE (RING-13C12, 99%) (102739-99-1 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>DIMETHYL TETRABROMOBISPHENOL A (RING-13C12, 99%) (37853-61-5 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,3,3',4',5-PENTACB UNLABELED (169295-14-1 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,3,3',4',5-PENTACB (13C12, 99%) (169295-14-1 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,2',3,4',5,5'-HEXACB UNLABELED (169295-19-6 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,2',3,4',5,5'-HEXACB (13C12, 99%) (169295-19-6 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,2',3,4'-TETRABDE UNLABELED (602326-25-0 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,2',3,4',5,5',6-HEPTACB UNLABELED (169295-23-2 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,2',3,4',5,5',6-HEPTACB (13C12, 99%) (1629523-2 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>3-METHOXY-2,2',4,4'-TETRABDE UNLABELED (602326-28-0 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>5-METHOXY-2,2',4,4'-TETRABDE UNLABELED (602326-19-2 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4'-METHOXY-2,2',4,5'-TETRABDE UNLABELED (476430-88-3 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>5'-METHOXY-2,2',4,4',5-PENTABDE UNLABELED (923925-51-3 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>6-METHOXY-2,2',4,4',5-PENTABDE UNLABELED (497106-83-9 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>6'-METHOXY-2,2',4,4',6-PENTABDE (13C12, 99%) (1391119-70-2 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>1,2,3,4-TETRACHLORODIBENZO-P-DIOXIN (13C6, 99%) (30746-58-8 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>3,3',4,4'-TETRABDE (BDE-77) (13C12, 99%) (93703-48-1 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>2,2',3,4,4',6-HEXABDE (BDE-139) (13C12, 99%) (36483-60-0 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>2,4,5-TRIBROMOANISOLE (RING-13C6, 99%) (95970-10-8 (Unlabeled))</b>	
Ecology - soil	Not available.

# EXTENDED PHENOLIC CALIBRATION SOLUTION CS5 (UNLABELED/<sup>13</sup>C, 99%) ES-5510-CS5

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### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

Other information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Regional legislation (waste) : Waste materials should be disposed of under conditions which meet Federal, State, and Local environmental control regulations.

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

### 14.1. UN number

UN-No.(DOT) : UN1920

### 14.2. UN proper shipping name

DOT Proper Shipping Name : Nonanes

Department of Transportation (DOT) Hazard Classes : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

Hazard labels (DOT) : 3 - Flammable liquid



Packing group (DOT) : III - Minor Danger

DOT Special Provisions (49 CFR 172.102) : B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then the bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has a flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable.

IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).

T2 - 1.5 178.274(d)(2) Normal..... 178.275(d)(3)

TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling =  $97 / 1 + a (tr - tf)$  Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.

DOT Packaging Exceptions (49 CFR 173.xxx) : 150

DOT Packaging Non Bulk (49 CFR 173.xxx) : 203

DOT Packaging Bulk (49 CFR 173.xxx) : 242

Marine pollutant : No

### 14.3. Additional information

Other information : No supplementary information available.

# EXTENDED PHENOLIC CALIBRATION SOLUTION CS5 (UNLABELED/13C, 99%) ES-5510-CS5

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### Overland transport

Packing group (ADR) : III  
Class (ADR) : 3 - Flammable liquid  
Hazard identification number (Kemler No.) : 30  
Classification code (ADR) : F1  
Danger labels (ADR) : 3 - Flammable liquids



Orange plates :

Tunnel restriction code : D/E  
Limited quantities (ADR) : 5L  
EAC : 3Y  
Excepted quantities (ADR) : E1

### Transport by sea

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.  
MFAG-No : 128

### Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 60 L  
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 220 L

### 14.4. Environmental hazards

Other information : No supplementary information available.

### 14.5. Special precautions for user

### 14.6. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### N-NONANE UNLABELED (111-84-2 (Unlabeled))

SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard
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#### TOLUENE UNLABELED (108-88-3)

Listed on SARA Section 313 (Specific toxic chemical listings)	
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard

### 15.2. International regulations

#### CANADA

#### EXTENDED PHENOLIC CALIBRATION SOLUTION CS5 (UNLABELED/13C, 99%)

Listed on the Canadian DSL (Domestic Substances List) inventory.

#### TOLUENE UNLABELED (108-88-3)

Listed on the Canadian DSL (Domestic Substances List) inventory.

# EXTENDED PHENOLIC CALIBRATION SOLUTION CS5 (UNLABELED/<sup>13</sup>C, 99%) ES-5510-CS5

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### 15.2.1. National regulations

No additional information available

### 15.3. US State regulations

#### N-NONANE UNLABELED (111-84-2 (Unlabeled))

U.S. - Massachusetts - Right To Know List  
U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

#### TOLUENE UNLABELED (108-88-3)

U.S. - Massachusetts - Right To Know List  
U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
WARNING! This product contains a chemical known by the state of California to cause birth defects or other reproductive harm.

## SECTION 16: Other information

Other information : None.

# EXTENDED PHENOLIC CALIBRATION SOLUTION CS5 (UNLABELED/<sup>13</sup>C, 99%) ES-5510-CS5

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Full text of R-, H- and EUH-phrases::

Acute Tox. 1 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 1
Acute Tox. 2 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 2
Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Aquatic Chronic 4	Hazardous to the aquatic environment - Chronic Hazard Category 4
Asp. Tox. 1	Aspiration hazard Category 1
Carc. 1A	Carcinogenicity Category 1A
Carc. 2	Carcinogenicity Category 2
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Flam. Liq. 2	Flammable liquids Category 2
Flam. Liq. 3	Flammable liquids Category 3
Repr. 2	Reproductive toxicity Category 2
Skin Irrit. 2	skin corrosion/irritation Category 2
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
STOT SE 2	Specific target organ toxicity (single exposure) Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H225	Highly flammable liquid and vapor
H226	Flammable liquid and vapor
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H312	Harmful in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H330	Fatal if inhaled
H332	Harmful if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H350	May cause cancer
H351	Suspected of causing cancer
H361d	Suspected of damaging the unborn child
H371	May cause damage to organs
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H413	May cause long lasting harmful effects to aquatic life
R10	Flammable
R11	Highly flammable
R20	Harmful by inhalation
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed
R21	Harmful in contact with skin
R22	Harmful if swallowed
R23	Toxic by inhalation
R36/37/38	Irritating to eyes, respiratory system and skin
R36/38	Irritating to eyes and skin
R40	Limited evidence of a carcinogenic effect
R45	May cause cancer
R48/20/21/22	Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed
R48/21/22	Harmful: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed
R49	May cause cancer by inhalation
R50	Very toxic to aquatic organisms
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R51	Toxic to aquatic organisms
R53	May cause long-term adverse effects in the aquatic environment
R62	Possible risk of impaired fertility
R63	Possible risk of harm to the unborn child

# EXTENDED PHENOLIC CALIBRATION SOLUTION CS5 (UNLABELED/<sup>13</sup>C, 99%) ES-5510-CS5

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R65	Harmful: may cause lung damage if swallowed
R67	Vapors may cause drowsiness and dizziness
F	Highly flammable
N	Dangerous for the environment
T	Toxic
Xi	Irritant
Xn	Harmful

CIL Multi-Solvent Mixture SDS

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*



# EXTENDED PHENOLIC CALIBRATION SOLUTION CS6 (UNLABELED/<sup>13</sup>C, 99%)

## Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 25/06/2014

Revision date:

Version: 1.0

**ES-5510-CS6**

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

Product form : Mixtures  
Product name. : EXTENDED PHENOLIC CALIBRATION SOLUTION CS6 (UNLABELED/<sup>13</sup>C, 99%)  
Product code : ES-5510-CS6

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### 1.2.1. Relevant identified uses

Industrial/Professional use spec : For professional use only.  
Industrial.

#### 1.2.2. Uses advised against

No additional information available

### 1.3. Details of the supplier of the safety data sheet

Cambridge Isotope Laboratories, Inc.  
50 Frontage Road  
Andover, MA 01810  
USA

USA: 1-800-322-1174 Int: 1-978-749-8000  
[cilsales@isotope.com](mailto:cilsales@isotope.com) [www.isotope.com](http://www.isotope.com)

### Emergency telephone number

Emergency numbers:

Chemtrec: 1-800-424-9300 (24 hours)  
International: 1-202-483-7616 (24 hours)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 2	H225
Skin Irrit. 2	H315
Eye Irrit. 2	H319
Carc. 2	H351
STOT SE 3	H336
Repr. 2	H361d

Full text of H-phrases: see section 16

#### Classification according to Directive 67/548/EEC or 1999/45/EC

Carc.Cat.3; R40  
F; R11  
Xn; R20  
Xn; R65

Full text of R-phrases: see section 16

#### Classification (GHS-US)

Flam. Liq. 2	H225
Skin Irrit. 2	H315
Eye Irrit. 2A	H319
Carc. 2	H351
Repr. 2	H361
STOT SE 3	H336
Aquatic Acute 2	H401

#### Adverse physicochemical, human health and environmental effects

No additional information available



# EXTENDED PHENOLIC CALIBRATION SOLUTION CS6 (UNLABELED/<sup>13</sup>C, 99%) ES-5510-CS6

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### 2.2. Label elements

#### Labeling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



Signal word (CLP)

Hazardous ingredients

Hazard statements (CLP)

Precautionary statements (CLP)

- : Danger
- : TOLUENE UNLABELED
- : H225 - Highly flammable liquid and vapor  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H336 - May cause drowsiness or dizziness  
H351 - Suspected of causing cancer  
H361 - Suspected of damaging the unborn child
- : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
P233 - Keep container tightly closed  
P240 - Ground/bond container and receiving equipment  
P241 - Use explosion-proof electrical, lighting, ventilating equipment  
P261 - Avoid breathing dust, fume, gas, mist, spray, vapors  
P264 - Wash Both hands thoroughly after handling  
P271 - Use only outdoors or in a well-ventilated area  
P280 - Wear protective clothing, protective gloves

#### GHS-US labeling

Hazard pictograms (GHS-US)



Signal word (GHS-US)

Hazard statements (GHS-US)

Precautionary statements (GHS-US)

- : Danger
- : H225 - Highly flammable liquid and vapor  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H336 - May cause drowsiness or dizziness  
H351 - Suspected of causing cancer (Dermal, Inhalation, oral)  
H361 - Suspected of damaging fertility or the unborn child (Dermal, oral, Inhalation)  
H401 - Toxic to aquatic life
- : P201 - Obtain special instructions before use  
P202 - Do not handle until all safety precautions have been read and understood  
P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking  
P233 - Keep container tightly closed  
P240 - Ground/bond container and receiving equipment  
P241 - Use explosion-proof electrical, lighting, ventilating equipment  
P242 - Use only non-sparking tools  
P243 - Take precautionary measures against static discharge  
P261 - Avoid breathing dust, fume, gas, mist, spray, vapors  
P264 - Wash Both hands thoroughly after handling  
P271 - Use only outdoors or in a well-ventilated area  
P273 - Avoid release to the environment  
P280 - Wear protective clothing, protective gloves  
P302+P352 - IF ON SKIN: Wash with plenty of soap and water  
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P308+P313 - IF exposed or concerned: Get medical advice/attention  
P312 - Call a POISON CENTER/doctor/physician if you feel unwell  
P321 - Specific treatment (see Hazard pictograms (CLP) on this label)  
P332+P313 - If skin irritation occurs: Get medical advice/attention

# EXTENDED PHENOLIC CALIBRATION SOLUTION CS6 (UNLABELED/13C, 99%) ES-5510-CS6

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according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

P337+P313 - If eye irritation persists: Get medical advice/attention  
P362 - Take off contaminated clothing and wash before reuse  
P370+P378 - In case of fire: Use Carbon dioxide., Dry chemical., Alcohol resistant foam., Water spray for extinction  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed  
P403+P235 - Store in a well-ventilated place. Keep cool  
P405 - Store locked up  
P501 - Dispose of contents/container to Comply with applicable regulations.

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

# EXTENDED PHENOLIC CALIBRATION SOLUTION CS6 (UNLABELED/<sup>13</sup>C, 99%) ES-5510-CS6

## Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 3.2. Mixtures

Name	Product identifier	%	Classification according to Directive 67/548/EEC
N-NONANE UNLABELED	(CAS No)111-84-2 (Unlabeled) (EC no)203-913-4	88.64680571	R10 Xn; R20 Xn; R65 R67
TOLUENE UNLABELED	(CAS No)108-88-3 (EC no)203-625-9 (EC index no)601-021-00-3	11.35027687	Repr.Cat.3; R62 Repr.Cat.3; R63 F; R11 Xi; R36/38 Carc.Cat.3; R40 N; R51 Xn; R20 R67 Xn; R65
PENTACHLOROANISOLE UNLABELED	(CAS No)1825-21-4 (Unlabeled)	0.00071881	Xn; R22 N; R50/53
METHYL TRICLOSAN UNLABELED	(CAS No)4640-01-1	0.00071594	Xn; R20/21/22 N; R50/53
METHYL TRICLOSAN (RING- <sup>13</sup> C12, 99%)	(CAS No)4640-01-1 (Unlabeled)	0.00014365	Xn; R20/21/22 N; R50/53
PENTACHLOROANISOLE ( <sup>13</sup> C6, 99%)	(CAS No)1825-21-4 (unlabeled)	0.00014296	Xn; R22 N; R50/53
2,4-DIBROMOANISOLE UNLABELED	(CAS No)21702-84-1 (EC no)244-536-5	0.00007205	Xi; R36/37/38
2,4,6-TRIBROMOANISOLE UNLABELED	(CAS No)607-99-8	0.00007118	R53
2,4,5-TRIBROMOANISOLE UNLABELED	(CAS No)95970-10-8 (Unlabeled)	0.00007117	R53
4-METHOXY-2,3,3',4',5-PENTACB UNLABELED	(CAS No)169295-14-1 (Unlabeled) (EC index no)602-039-00-4	0.00007111	Xn; R48/20/21/22 N; R50/53
4-METHOXY-2,2',3,4',5,5'-HEXACB UNLABELED	(CAS No)169295-19-6 (Unlabeled) (EC index no)602-039-00-4	0.00007083	Xn; R48/20/21/22 N; R50/53
4-METHOXY-2,2',3,4',5,5',6-HEPTACB UNLABELED	(CAS No)169295-23-2 (Unlabeled) (EC index no)602-039-00-4	0.00007064	Xn; R48/20/21/22 N; R50/53
PENTABROMOANISOLE UNLABELED	(CAS No)1825-26-9	0.00007024	R53
6-METHOXY-2,2',4,4'-TETRABDE UNLABELED	(CAS No)102739-99-1	0.00007019	T; R23 Xn; R22 Xi; R36/37/38
4-METHOXY-2,2',3,4'-TETRABDE UNLABELED	(CAS No)602326-25-0 (Unlabeled)	0.00007019	Xn; R48/21/22 N; R50/53
3-METHOXY-2,2',4,4'-TETRABDE UNLABELED	(CAS No)602326-28-0 (Unlabeled)	0.00007019	Xn; R20/21/22 N; R50/53
5-METHOXY-2,2',4,4'-TETRABDE UNLABELED	(CAS No)602326-19-2 (Unlabeled)	0.00007019	Xn; R20/21/22 N; R50/53
4'-METHOXY-2,2',4,5'-TETRABDE UNLABELED	(CAS No)476430-88-3 (Unlabeled)	0.00007019	Xn; R20/21/22 Xi; R36/37/38
6-METHOXY-2,2',4,4',5-PENTABDE UNLABELED	(CAS No)497106-83-9 (Unlabeled)	0.00006997	Carc.Cat.1; R45 Carc.Cat.1; R49 Xn; R20 Xn; R21 Xn; R22 N; R50
5'-METHOXY-2,2',4,4',5-PENTABDE UNLABELED	(CAS No)923925-51-3 (Unlabeled)	0.00006993	Carc.Cat.1; R45 Carc.Cat.1; R49 Xn; R20 Xn; R21 Xn; R22 N; R50

# EXTENDED PHENOLIC CALIBRATION SOLUTION CS6 (UNLABELED/<sup>13</sup>C, 99%) ES-5510-CS6

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according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Name	Product identifier	%	Classification according to Directive 67/548/EEC
DIMETHYL TETRABROMOBISPHENOL A UNLABELED	(CAS No)37853-61-5 (EC no)201-236-9	0.00003588	Xi; R36/37/38 N; R50
2,4-DIBROMOANISOLE (RING-13C6, 99%)	(CAS No)21702-84-1 (Unlabeled) (EC no)244-536-5	0.0000144	Xi; R36/37/38
2,4,5-TRIBROMOANISOLE (RING-13C6, 99%)	(CAS No)95970-10-8 (Unlabeled)	0.00001423	R53
2,4,6-TRIBROMOANISOLE (RING-13C6, 99%)	(CAS No)607-99-8 (Unlabeled)	0.00001423	R53
4-METHOXY-2,3,3',4',5-PENTACB (13C12, 99%)	(CAS No)169295-14-1 (Unlabeled) (EC index no)602-039-00-4	0.0000142	Xn; R48/20/21/22 N; R50/53
4-METHOXY-2,2',3,4',5,5'-HEXACB (13C12, 99%)	(CAS No)169295-19-6 (Unlabeled) (EC index no)602-039-00-4	0.00001415	Xn; R48/20/21/22 N; R50/53
4-METHOXY-2,2',3,4',5,5',6-HEPTACB (13C12, 99%)	(CAS No)1629523-2 (Unlabeled) (EC index no)602-039-00-4	0.00001411	Xn; R48/20/21/22 N; R50/53
PENTABROMOANISOLE (13C6, 99%)	(CAS No)1825-26-9 (Unlabeled)	0.00001405	R53
6-METHOXY-2,2',4,4'-TETRABDE (RING-13C12, 99%)	(CAS No)102739-99-1 (Unlabeled)	0.00001403	T; R23 Xn; R22 Xi; R36/37/38
6'-METHOXY-2,2',4,4',6-PENTABDE (13C12, 99%)	(CAS No)1391119-70-2 (Unlabeled)	0.00001399	Xn; R20/21/22 Xi; R36/37/38
2,2',3,3',4,5,5',6,6'-NONACB (PCB-208) (13C12, 99%)	(CAS No)52663-77-1 (Unlabeled)	0.00001366	Not classified
3,3',4,4'-TETRABDE (BDE-77) (13C12, 99%)	(CAS No)93703-48-1 (Unlabeled)	0.00001024	Xn; R20/21/22 Xi; R36/37/38
2,2',3,4,4',6-HEXABDE (BDE-139) (13C12, 99%)	(CAS No)36483-60-0 (Unlabeled)	0.00001024	Xn; R20/21/22 Xi; R36/37/38
DIMETHYL TETRABROMOBISPHENOL A (RING-13C12, 99%)	(CAS No)37853-61-5 (Unlabeled) (EC no)201-236-9	0.00000718	Xi; R36/37/38 N; R50
1,2,3,4-TETRACHLORODIBENZO-P-DIOXIN (13C6, 99%)	(CAS No)30746-58-8 (Unlabeled)	0.00000341	Carc.Cat.1; R45 Carc.Cat.1; R49 Xn; R20 Xn; R21 Xn; R22

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
N-NONANE UNLABELED	(CAS No)111-84-2 (Unlabeled) (EC no)203-913-4	88.64680571	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H336 Asp. Tox. 1, H304
TOLUENE UNLABELED	(CAS No)108-88-3 (EC no)203-625-9 (EC index no)601-021-00-3	11.35027687	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Carc. 2, H351 Repr. 2, H361d STOT SE 3, H336 STOT SE 2, H371 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Acute 1, H400
PENTACHLOROANISOLE UNLABELED	(CAS No)1825-21-4 (Unlabeled)	0.00071881	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
METHYL TRICLOSAN UNLABELED	(CAS No)4640-01-1	0.00071594	Aquatic Acute 1, H400
METHYL TRICLOSAN (RING-13C12, 99%)	(CAS No)4640-01-1 (Unlabeled)	0.00014365	Aquatic Acute 1, H400
PENTACHLOROANISOLE (13C6, 99%)	(CAS No)1825-21-4 (unlabeled)	0.00014296	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
2,4-DIBROMOANISOLE UNLABELED	(CAS No)21702-84-1 (EC no)244-536-5	0.00007205	Skin Irrit. 2, H315

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2,4,6-TRIBROMOANISOLE UNLABELED	(CAS No)607-99-8	0.00007118	Aquatic Chronic 4, H413
2,4,5-TRIBROMOANISOLE UNLABELED	(CAS No)95970-10-8 (Unlabeled)	0.00007117	Aquatic Chronic 4, H413
4-METHOXY-2,3,3',4',5-PENTACB UNLABELED	(CAS No)169295-14-1 (Unlabeled) (EC index no)602-039-00-4	0.00007111	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
4-METHOXY-2,2',3,4',5,5'-HEXACB UNLABELED	(CAS No)169295-19-6 (Unlabeled) (EC index no)602-039-00-4	0.00007083	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
4-METHOXY-2,2',3,4',5,5',6-HEPTACB UNLABELED	(CAS No)169295-23-2 (Unlabeled) (EC index no)602-039-00-4	0.00007064	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
PENTABROMOANISOLE UNLABELED	(CAS No)1825-26-9	0.00007024	Aquatic Chronic 4, H413
6-METHOXY-2,2',4,4'-TETRABDE UNLABELED	(CAS No)102739-99-1	0.00007019	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Acute Tox. 2 (Inhalation:vapour), H330 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
4-METHOXY-2,2',3,4'-TETRABDE UNLABELED	(CAS No)602326-25-0 (Unlabeled)	0.00007019	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 STOT SE 2, H371 Aquatic Chronic 1, H410
3-METHOXY-2,2',4,4'-TETRABDE UNLABELED	(CAS No)602326-28-0 (Unlabeled)	0.00007019	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312
5-METHOXY-2,2',4,4'-TETRABDE UNLABELED	(CAS No)602326-19-2 (Unlabeled)	0.00007019	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312
4'-METHOXY-2,2',4,5'-TETRABDE UNLABELED	(CAS No)476430-88-3 (Unlabeled)	0.00007019	Not classified
6-METHOXY-2,2',4,4',5-PENTABDE UNLABELED	(CAS No)497106-83-9 (Unlabeled)	0.00006997	Carc. 1A, H350 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312 Aquatic Acute 1, H400
5'-METHOXY-2,2',4,4',5-PENTABDE UNLABELED	(CAS No)923925-51-3 (Unlabeled)	0.00006993	Carc. 1A, H350 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312 Aquatic Acute 1, H400
DIMETHYL TETRABROMOBISPHENOL A UNLABELED	(CAS No)37853-61-5 (EC no)201-236-9	0.00003588	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 1, H400 (M=10)
2,4-DIBROMOANISOLE (RING-13C6, 99%)	(CAS No)21702-84-1 (Unlabeled) (EC no)244-536-5	0.0000144	Skin Irrit. 2, H315
2,4,5-TRIBROMOANISOLE (RING-13C6, 99%)	(CAS No)95970-10-8 (Unlabeled)	0.00001423	Aquatic Chronic 4, H413
2,4,6-TRIBROMOANISOLE (RING-13C6, 99%)	(CAS No)607-99-8 (Unlabeled)	0.00001423	Aquatic Chronic 4, H413
4-METHOXY-2,3,3',4',5-PENTACB (13C12, 99%)	(CAS No)169295-14-1 (Unlabeled) (EC index no)602-039-00-4	0.0000142	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
4-METHOXY-2,2',3,4',5,5'-HEXACB (13C12, 99%)	(CAS No)169295-19-6 (Unlabeled) (EC index no)602-039-00-4	0.00001415	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
4-METHOXY-2,2',3,4',5,5',6-HEPTACB (13C12, 99%)	(CAS No)1629523-2 (Unlabeled) (EC index no)602-039-00-4	0.00001411	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
PENTABROMOANISOLE (13C6, 99%)	(CAS No)1825-26-9 (Unlabeled)	0.00001405	Aquatic Chronic 4, H413
6-METHOXY-2,2',4,4'-TETRABDE (RING-13C12, 99%)	(CAS No)102739-99-1 (Unlabeled)	0.00001403	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Acute Tox. 1 (Inhalation:vapour), H330 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
6'-METHOXY-2,2',4,4',6-PENTABDE (13C12, 99%)	(CAS No)1391119-70-2 (Unlabeled)	0.00001399	Not classified
2,2',3,3',4,5,5',6,6'-NONACB (PCB-208) (13C12, 99%)	(CAS No)52663-77-1 (Unlabeled)	0.00001366	Not classified
3,3',4,4'-TETRABDE (BDE-77) (13C12, 99%)	(CAS No)93703-48-1 (Unlabeled)	0.00001024	Not classified
2,2',3,4,4',6-HEXABDE (BDE-139) (13C12, 99%)	(CAS No)36483-60-0 (Unlabeled)	0.00001024	Not classified

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
DIMETHYL TETRABROMOBISPHENOL A (RING-13C12, 99%)	(CAS No)37853-61-5 (Unlabeled) (EC no)201-236-9	0.00000718	Skin Irrit. 2, H315 STOT SE 3, H336 Aquatic Acute 1, H400
1,2,3,4-TETRACHLORODIBENZO-P-DIOXIN (13C6, 99%)	(CAS No)30746-58-8 (Unlabeled)	0.00000341	Carc. 1A, H350 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312

Name	Product identifier	%	Classification (GHS-US)
N-NONANE UNLABELED	(CAS No)111-84-2 (Unlabeled)	88.64680571	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H336 Asp. Tox. 1, H304
TOLUENE UNLABELED	(CAS No)108-88-3	11.35027687	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Carc. 2, H351 Repr. 2, H361 STOT SE 3, H336 STOT SE 2, H371 Asp. Tox. 1, H304 Aquatic Acute 1, H400

Full text of R-, H- and EUH-phrases: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Assure fresh air breathing. Allow the victim to rest.
First-aid measures after skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries	: Not expected to present a significant hazard under anticipated conditions of normal use.
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### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
unsuitable extinguishing media	: Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

No additional information available

### 5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Emergency procedures	: Evacuate unnecessary personnel.
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#### 6.1.2. For emergency responders

Protective equipment	: Equip cleanup crew with proper protection.
Emergency procedures	: Ventilate area.

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### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store at room temperature away from light and moisture.  
Incompatible products : Strong bases. strong acids.  
Incompatible materials : Sources of ignition. Direct sunlight.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

N-NONANE UNLABELED (111-84-2 (Unlabeled))		
Italy - Portugal- USA ACGIH	ACGIH TWA (ppm)	200.0000000000 ppm Central Nervous System impairment.
TOLUENE UNLABELED (108-88-3)		
Italy - Portugal- USA ACGIH	ACGIH TWA (ppm)	20.0000000000 ppm Visual impairment, Female reproductive, Pregnancy loss
USA OSHA	OSHA PEL (TWA) (ppm)	100.0000000000 ppm USA. OSHA - TABLE Z-1 Limits for Air Contaminants 1910.1000
USA OSHA	OSHA PEL (STEL) (ppm)	150.0000000000 ppm USA. OSHA - TABLE Z-1 Limits for Air Contaminants 1910.1000

### 8.2. Exposure controls

Personal protective equipment : Avoid all unnecessary exposure. Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus.



Hand protection : Wear protective gloves.  
Eye protection : Chemical goggles or safety glasses.  
Respiratory protection : Wear approved mask.  
Other information : When using, do not eat, drink or smoke.

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### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid.
Color	: Colorless.
Odor	: characteristic.
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: -53 °C (- 63 °F) - lit
Freezing point	: No data available
Boiling point	: 151 °C (304 °F) - lit
Flash point	: 31.0 °C (87.8 °F) - closed cup
Self ignition temperature	: 205 °C (401 °F)
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: 12.4 hPa (9.3 mmHg) at 37.7 °C (99.9 °F)
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: Water: 0 %
Log Pow	: 5.65
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: 0.87 - 2.9 % (V)

#### 9.2. Other information

No additional information available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No additional information available

#### 10.2. Chemical stability

See storage and expiration date on CoA.

#### 10.3. Possibility of hazardous reactions

Not established.

#### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

#### 10.5. Incompatible materials

strong acids. Strong bases.

#### 10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Not classified

#### 6-METHOXY-2,2',4,4'-TETRABDE UNLABELED (102739-99-1)

ATE (oral)	500.000 mg/kg body weight
ATE (vapors)	0.500 mg/l/4h

#### N-NONANE UNLABELED (111-84-2 (Unlabeled))

LC50 inhalation rat (ppm)	3200 ppm/4h
ATE (dust, mist)	1.500 mg/l/4h



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<b>TOLUENE UNLABELED (108-88-3)</b>	
LD50 oral rat	> 5580 mg/kg
LD50 dermal rabbit	12196 mg/kg
LC50 inhalation rat (mg/l)	12500 - 28800 mg/m <sup>3</sup> 4 h
ATE (dermal)	12196.000 mg/kg body weight
ATE (gases)	4500.000 ppmV/4h
ATE (vapors)	12.500 mg/l/4h
ATE (dust, mist)	1.500 mg/l/4h

<b>6-METHOXY-2,2',4,4'-TETRABDE (RING-13C12, 99%) (102739-99-1 (Unlabeled))</b>	
ATE (oral)	500.000 mg/kg body weight
ATE (vapors)	0.050 mg/l/4h

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Suspected of causing cancer.
Reproductive toxicity	: Suspected of damaging the unborn child.
Specific target organ toxicity (single exposure)	: May cause drowsiness or dizziness.
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

### 12.1. Toxicity

<b>DIMETHYL TETRABROMOBISPHENOL A UNLABELED (37853-61-5)</b>	
LC50 fish 1	0.06 mg/l Pimephales promelas (fathead minnow) - 96 h
EC50 Daphnia 1	7.9 mg/l Daphnia magna (Water flea) - 48 h

<b>PENTACHLOROANISOLE (13C6, 99%) (1825-21-4 (unlabeled))</b>	
LC50 fish 1	0.65 mg/l Pimephales promelas (fathead minnow) - 96 h
EC50 Daphnia 1	0.027 mg/l Daphnia magna (Water flea) - 48 h

<b>TOLUENE UNLABELED (108-88-3)</b>	
LC50 fish 1	74 - 340 mg/l Lepomis macrochirus (Bluegill) - 96h
LC50 other aquatic organisms 1	10 mg/l Pseudokirchneriella subcapitata (Green algae) - 24 h
EC50 Daphnia 1	8 mg/l Daphnia magna (Water flea) - 24h
LC50 fish 2	7.63 mg/l Oncorhynchus mykiss (Rainbow trout) - 96 h
EC50 Daphnia 2	6 mg/l Daphnia magna (Water flea) - Immobilization - 48 h
ErC50 (algae)	245 mg/l Chlorella vulgaris (Fresh water algae) - 24 h
LOEC (chronic)	8.04 mg/l Pimephales promelas (Fathead minnow) - 7 d
NOEC (chronic)	5.44 mg/l Pimephales promelas (fathead minnow) - 7 d

<b>PENTACHLOROANISOLE UNLABELED (1825-21-4 (Unlabeled))</b>	
LC50 fish 1	0.65 mg/l Pimephales promelas (fathead minnow) - 96 h
EC50 Daphnia 1	0.027 mg/l Daphnia magna (Water flea) - 48 h

<b>DIMETHYL TETRABROMOBISPHENOL A (RING-13C12, 99%) (37853-61-5 (Unlabeled))</b>	
LC50 fish 1	0.06 mg/l Pimephales promelas (fathead minnow) - 96 h
EC50 Daphnia 1	7.9 mg/l Daphnia magna (Water flea) - 48 h

### 12.2. Persistence and degradability

<b>EXTENDED PHENOLIC CALIBRATION SOLUTION CS6 (UNLABELED/13C, 99%)</b>	
Persistence and degradability	Not established.

<b>6-METHOXY-2,2',4,4'-TETRABDE UNLABELED (102739-99-1)</b>	
Persistence and degradability	Not available.

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<b>DIMETHYL TETRABROMOBISPHENOL A UNLABELED (37853-61-5)</b>	
Persistence and degradability	Not available.
<b>METHYL TRICLOSAN (RING-<sup>13</sup>C<sub>12</sub>, 99%) (4640-01-1 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>METHYL TRICLOSAN UNLABELED (4640-01-1)</b>	
Persistence and degradability	Not available.
<b>PENTACHLOROANISOLE (<sup>13</sup>C<sub>6</sub>, 99%) (1825-21-4 (unlabeled))</b>	
Persistence and degradability	Not available.
<b>N-NONANE UNLABELED (111-84-2 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>PENTACHLOROANISOLE UNLABELED (1825-21-4 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>2,4,6-TRIBROMOANISOLE UNLABELED (607-99-8)</b>	
Persistence and degradability	Not available.
<b>2,4,5-TRIBROMOANISOLE UNLABELED (95970-10-8 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>2,4,6-TRIBROMOANISOLE (RING-<sup>13</sup>C<sub>6</sub>, 99%) (607-99-8 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>PENTABROMOANISOLE (<sup>13</sup>C<sub>6</sub>, 99%) (1825-26-9 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>PENTABROMOANISOLE UNLABELED (1825-26-9)</b>	
Persistence and degradability	Not available.
<b>2,4-DIBROMOANISOLE (RING-<sup>13</sup>C<sub>6</sub>, 99%) (21702-84-1 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>2,4-DIBROMOANISOLE UNLABELED (21702-84-1)</b>	
Persistence and degradability	Not available.
<b>6-METHOXY-2,2',4,4'-TETRABDE (RING-<sup>13</sup>C<sub>12</sub>, 99%) (102739-99-1 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>DIMETHYL TETRABROMOBISPHENOL A (RING-<sup>13</sup>C<sub>12</sub>, 99%) (37853-61-5 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,3,3',4',5-PENTACB UNLABELED (169295-14-1 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,3,3',4',5-PENTACB (<sup>13</sup>C<sub>12</sub>, 99%) (169295-14-1 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,2',3,4',5,5'-HEXACB UNLABELED (169295-19-6 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,2',3,4',5,5'-HEXACB (<sup>13</sup>C<sub>12</sub>, 99%) (169295-19-6 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,2',3,4'-TETRABDE UNLABELED (602326-25-0 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,2',3,4',5,5',6-HEPTACB UNLABELED (169295-23-2 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4-METHOXY-2,2',3,4',5,5',6-HEPTACB (<sup>13</sup>C<sub>12</sub>, 99%) (1629523-2 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>3-METHOXY-2,2',4,4'-TETRABDE UNLABELED (602326-28-0 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>5-METHOXY-2,2',4,4'-TETRABDE UNLABELED (602326-19-2 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>4'-METHOXY-2,2',4,5'-TETRABDE UNLABELED (476430-88-3 (Unlabeled))</b>	

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Persistence and degradability	Not available.
<b>5'-METHOXY-2,2',4,4',5-PENTABDE UNLABELED (923925-51-3 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>6-METHOXY-2,2',4,4',5-PENTABDE UNLABELED (497106-83-9 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>6'-METHOXY-2,2',4,4',6-PENTABDE (13C12, 99%) (1391119-70-2 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>1,2,3,4-TETRACHLORODIBENZO-P-DIOXIN (13C6, 99%) (30746-58-8 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>3,3',4,4'-TETRABDE (BDE-77) (13C12, 99%) (93703-48-1 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>2,2',3,4,4',6-HEXABDE (BDE-139) (13C12, 99%) (36483-60-0 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>2,4,5-TRIBROMOANISOLE (RING-13C6, 99%) (95970-10-8 (Unlabeled))</b>	
Persistence and degradability	Not available.
<b>12.3. Bioaccumulative potential</b>	
<b>EXTENDED PHENOLIC CALIBRATION SOLUTION CS6 (UNLABELED/<sup>13</sup>C, 99%)</b>	
Log Pow	5.65
Bioaccumulative potential	Not established.
<b>6-METHOXY-2,2',4,4'-TETRABDE UNLABELED (102739-99-1)</b>	
Bioaccumulative potential	Not available.
<b>DIMETHYL TETRABROMOBISPHENOL A UNLABELED (37853-61-5)</b>	
Bioaccumulative potential	Not available.
<b>METHYL TRICLOSAN (RING-13C12, 99%) (4640-01-1 (Unlabeled))</b>	
Log Pow	5.269
Bioaccumulative potential	Not available.
<b>METHYL TRICLOSAN UNLABELED (4640-01-1)</b>	
Log Pow	5.269
Bioaccumulative potential	Not available.
<b>PENTACHLOROANISOLE (13C6, 99%) (1825-21-4 (unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>N-NONANE UNLABELED (111-84-2 (Unlabeled))</b>	
Log Pow	5.65
Bioaccumulative potential	Indication of bioaccumulation.
<b>TOLUENE UNLABELED (108-88-3)</b>	
Bioaccumulative potential	Not available.
<b>PENTACHLOROANISOLE UNLABELED (1825-21-4 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>2,4-DIBROMOANISOLE (RING-13C6, 99%) (21702-84-1 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>2,4-DIBROMOANISOLE UNLABELED (21702-84-1)</b>	
Bioaccumulative potential	Not available.
<b>6-METHOXY-2,2',4,4'-TETRABDE (RING-13C12, 99%) (102739-99-1 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>DIMETHYL TETRABROMOBISPHENOL A (RING-13C12, 99%) (37853-61-5 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4-METHOXY-2,3,3',4',5-PENTACB UNLABELED (169295-14-1 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4-METHOXY-2,3,3',4',5-PENTACB (13C12, 99%) (169295-14-1 (Unlabeled))</b>	
Bioaccumulative potential	Not available.

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<b>4-METHOXY-2,2',3,4',5,5'-HEXACB UNLABELED (169295-19-6 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4-METHOXY-2,2',3,4',5,5'-HEXACB (13C12, 99%) (169295-19-6 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4-METHOXY-2,2',3,4'-TETRABDE UNLABELED (602326-25-0 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4-METHOXY-2,2',3,4',5,5',6-HEPTACB UNLABELED (169295-23-2 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4-METHOXY-2,2',3,4',5,5',6-HEPTACB (13C12, 99%) (1629523-2 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>3-METHOXY-2,2',4,4'-TETRABDE UNLABELED (602326-28-0 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>5-METHOXY-2,2',4,4'-TETRABDE UNLABELED (602326-19-2 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>4'-METHOXY-2,2',4,5'-TETRABDE UNLABELED (476430-88-3 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>5'-METHOXY-2,2',4,4',5-PENTABDE UNLABELED (923925-51-3 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>6-METHOXY-2,2',4,4',5-PENTABDE UNLABELED (497106-83-9 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>6'-METHOXY-2,2',4,4',6-PENTABDE (13C12, 99%) (1391119-70-2 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>1,2,3,4-TETRACHLORODIBENZO-P-DIOXIN (13C6, 99%) (30746-58-8 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>3,3',4,4'-TETRABDE (BDE-77) (13C12, 99%) (93703-48-1 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>2,2',3,4,4',6-HEXABDE (BDE-139) (13C12, 99%) (36483-60-0 (Unlabeled))</b>	
Bioaccumulative potential	Not available.
<b>12.4. Mobility in soil</b>	
<b>6-METHOXY-2,2',4,4'-TETRABDE UNLABELED (102739-99-1)</b>	
Ecology - soil	Not available.
<b>DIMETHYL TETRABROMOBISPHENOL A UNLABELED (37853-61-5)</b>	
Ecology - soil	Not available.
<b>METHYL TRICLOSAN (RING-13C12, 99%) (4640-01-1 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>METHYL TRICLOSAN UNLABELED (4640-01-1)</b>	
Ecology - soil	Not available.
<b>PENTACHLOROANISOLE (13C6, 99%) (1825-21-4 (unlabeled))</b>	
Ecology - soil	Not available.
<b>N-NONANE UNLABELED (111-84-2 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>TOLUENE UNLABELED (108-88-3)</b>	
Ecology - soil	Not available.
<b>PENTACHLOROANISOLE UNLABELED (1825-21-4 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>2,4,6-TRIBROMOANISOLE UNLABELED (607-99-8)</b>	
Ecology - soil	Not available.
<b>2,4,5-TRIBROMOANISOLE UNLABELED (95970-10-8 (Unlabeled))</b>	
Ecology - soil	Not available.

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<b>2,4,6-TRIBROMOANISOLE (RING-13C6, 99%) (607-99-8 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>PENTABROMOANISOLE (13C6, 99%) (1825-26-9 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>PENTABROMOANISOLE UNLABELED (1825-26-9)</b>	
Ecology - soil	Not available.
<b>2,4-DIBROMOANISOLE (RING-13C6, 99%) (21702-84-1 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>2,4-DIBROMOANISOLE UNLABELED (21702-84-1)</b>	
Ecology - soil	Not available.
<b>6-METHOXY-2,2',4,4'-TETRABDE (RING-13C12, 99%) (102739-99-1 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>DIMETHYL TETRABROMOBISPHENOL A (RING-13C12, 99%) (37853-61-5 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,3,3',4',5-PENTACB UNLABELED (169295-14-1 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,3,3',4',5-PENTACB (13C12, 99%) (169295-14-1 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,2',3,4',5,5'-HEXACB UNLABELED (169295-19-6 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,2',3,4',5,5'-HEXACB (13C12, 99%) (169295-19-6 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,2',3,4'-TETRABDE UNLABELED (602326-25-0 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,2',3,4',5,5',6-HEPTACB UNLABELED (169295-23-2 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4-METHOXY-2,2',3,4',5,5',6-HEPTACB (13C12, 99%) (1629523-2 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>3-METHOXY-2,2',4,4'-TETRABDE UNLABELED (602326-28-0 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>5-METHOXY-2,2',4,4'-TETRABDE UNLABELED (602326-19-2 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>4'-METHOXY-2,2',4,5'-TETRABDE UNLABELED (476430-88-3 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>5'-METHOXY-2,2',4,4',5-PENTABDE UNLABELED (923925-51-3 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>6-METHOXY-2,2',4,4',5-PENTABDE UNLABELED (497106-83-9 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>6'-METHOXY-2,2',4,4',6-PENTABDE (13C12, 99%) (1391119-70-2 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>1,2,3,4-TETRACHLORODIBENZO-P-DIOXIN (13C6, 99%) (30746-58-8 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>3,3',4,4'-TETRABDE (BDE-77) (13C12, 99%) (93703-48-1 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>2,2',3,4,4',6-HEXABDE (BDE-139) (13C12, 99%) (36483-60-0 (Unlabeled))</b>	
Ecology - soil	Not available.
<b>2,4,5-TRIBROMOANISOLE (RING-13C6, 99%) (95970-10-8 (Unlabeled))</b>	
Ecology - soil	Not available.

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### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

Other information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Regional legislation (waste) : Waste materials should be disposed of under conditions which meet Federal, State, and Local environmental control regulations.

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

### 14.1. UN number

UN-No.(DOT) : UN1920

### 14.2. UN proper shipping name

DOT Proper Shipping Name : Nonanes

Department of Transportation (DOT) Hazard Classes : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

Hazard labels (DOT) : 3 - Flammable liquid



Packing group (DOT) : III - Minor Danger

DOT Special Provisions (49 CFR 172.102) : B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then the bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has a flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable.

IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).

T2 - 1.5 178.274(d)(2) Normal..... 178.275(d)(3)

TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling =  $97 / 1 + a (tr - tf)$  Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.

DOT Packaging Exceptions (49 CFR 173.xxx) : 150

DOT Packaging Non Bulk (49 CFR 173.xxx) : 203

DOT Packaging Bulk (49 CFR 173.xxx) : 242

Marine pollutant : No

### 14.3. Additional information

Other information : No supplementary information available.

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### Overland transport

Packing group (ADR) : III  
Class (ADR) : 3 - Flammable liquid  
Hazard identification number (Kemler No.) : 30  
Classification code (ADR) : F1  
Danger labels (ADR) : 3 - Flammable liquids



Orange plates :

Tunnel restriction code : D/E  
Limited quantities (ADR) : 5L  
EAC : 3Y  
Excepted quantities (ADR) : E1

### Transport by sea

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.  
MFAG-No : 128

### Air transport

DOT Quantity Limitations Passenger aircraft/rail : 60 L  
(49 CFR 173.27)  
DOT Quantity Limitations Cargo aircraft only (49 : 220 L  
CFR 175.75)

### 14.4. Environmental hazards

Other information : No supplementary information available.

### 14.5. Special precautions for user

### 14.6. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### N-NONANE UNLABELED (111-84-2 (Unlabeled))

SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard
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#### TOLUENE UNLABELED (108-88-3)

Listed on SARA Section 313 (Specific toxic chemical listings)	
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard

### 15.2. International regulations

#### CANADA

#### EXTENDED PHENOLIC CALIBRATION SOLUTION CS6 (UNLABELED/13C, 99%)

Listed on the Canadian DSL (Domestic Substances List) inventory.

#### TOLUENE UNLABELED (108-88-3)

Listed on the Canadian DSL (Domestic Substances List) inventory.

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### 15.2.1. National regulations

No additional information available

### 15.3. US State regulations

#### N-NONANE UNLABELED (111-84-2 (Unlabeled))

U.S. - Massachusetts - Right To Know List  
U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

#### TOLUENE UNLABELED (108-88-3)

U.S. - Massachusetts - Right To Know List  
U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
WARNING! This product contains a chemical known by the state of California to cause birth defects or other reproductive harm.

## SECTION 16: Other information

Other information : None.



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Full text of R-, H- and EUH-phrases::

Acute Tox. 1 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 1
Acute Tox. 2 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 2
Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Aquatic Chronic 4	Hazardous to the aquatic environment - Chronic Hazard Category 4
Asp. Tox. 1	Aspiration hazard Category 1
Carc. 1A	Carcinogenicity Category 1A
Carc. 2	Carcinogenicity Category 2
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Flam. Liq. 2	Flammable liquids Category 2
Flam. Liq. 3	Flammable liquids Category 3
Repr. 2	Reproductive toxicity Category 2
Skin Irrit. 2	skin corrosion/irritation Category 2
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
STOT SE 2	Specific target organ toxicity (single exposure) Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H225	Highly flammable liquid and vapor
H226	Flammable liquid and vapor
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H312	Harmful in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H330	Fatal if inhaled
H332	Harmful if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H350	May cause cancer
H351	Suspected of causing cancer
H361d	Suspected of damaging the unborn child
H371	May cause damage to organs
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H413	May cause long lasting harmful effects to aquatic life
R10	Flammable
R11	Highly flammable
R20	Harmful by inhalation
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed
R21	Harmful in contact with skin
R22	Harmful if swallowed
R23	Toxic by inhalation
R36/37/38	Irritating to eyes, respiratory system and skin
R36/38	Irritating to eyes and skin
R40	Limited evidence of a carcinogenic effect
R45	May cause cancer
R48/20/21/22	Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed
R48/21/22	Harmful: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed
R49	May cause cancer by inhalation
R50	Very toxic to aquatic organisms
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R51	Toxic to aquatic organisms
R53	May cause long-term adverse effects in the aquatic environment
R62	Possible risk of impaired fertility
R63	Possible risk of harm to the unborn child

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## Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

R65	Harmful: may cause lung damage if swallowed
R67	Vapors may cause drowsiness and dizziness
F	Highly flammable
N	Dangerous for the environment
T	Toxic
Xi	Irritant
Xn	Harmful

CIL Multi-Solvent Mixture SDS

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*