



BFR PAR SOLUTION UNLABELED 1000 NG/ML IN NONANE

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 06/12/2018

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Version: 1.0

EO-5617

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

1.1. Product identifier

Product form : Mixtures
Product name : BFR PAR SOLUTION UNLABELED 1000 NG/ML IN NONANE
Product code : EO-5617

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

1.2.1. Relevant identified uses

Main use category : Professional use
Industrial/Professional use spec : For professional use only

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 www.isotope.com

Emergency telephone number

Emergency numbers:

Chemtrec: 1-800-424-9300 (24 hours)
International: 1-703-741-5970 (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. 3 H226
Skin Irrit. 2 H315
Eye Irrit. 2 H319
STOT SE 3 H336
Asp. Tox. 1 H304

Full text of hazard classes and H-statements : see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

R10
Xn; R20
Xn; R65
Xi; R36/38
R67

Full text of R-phrases: see section 16

GHS-US classification

Flam. Liq. 3 H226
Skin Irrit. 2 H315
Eye Irrit. 2 H319
STOT SE 3 H336
Asp. Tox. 1 H304

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

Central Nervous System. Flammable liquid and vapour. May cause drowsiness or dizziness. Harmful if inhaled. Causes skin irritation. Causes serious eye irritation. May be fatal if swallowed and enters airways.

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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

: 2,2',4,4',5,5'-HEXABB (PBB-153) UNLABELED; N-NONANE UNLABELED

Hazard statements (CLP)

: H226 - Flammable liquid and vapour
H304 - May be fatal if swallowed and enters airways
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H336 - May cause drowsiness or dizziness

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/vapors/spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear eye protection, face protection, protective clothing, protective gloves.

GHS-US labeling

Hazard pictograms (GHS-US)



Signal word (GHS-US)

: Danger

Hazard statements (GHS-US)

: H226 - Flammable liquid and vapour
H304 - May be fatal if swallowed and enters airways
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H336 - May cause drowsiness or dizziness

Precautionary statements (GHS-US)

: 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 fume, mist, spray, vapors.
P264 - Wash hands, forearms and face thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear eye protection, face protection, protective clothing, protective gloves.
P301+P310 - If swallowed: Immediately call a doctor, a POISON CENTER
P302+P352 - If on skin: Wash with plenty of water
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 - If inhaled: Remove person to fresh air and keep 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
P312 - Call a doctor, a POISON CENTER if you feel unwell
P321 - Specific treatment (see Hazardous component(s) for labeling on this label)
P331 - Do NOT induce vomiting.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P370+P378 - In case of fire: Use alcohol resistant foam, carbon dioxide (CO2), dry extinguishing powder to extinguish.
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 hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

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2.3. Other hazards

No additional information available

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Directive 67/548/EEC
N-NONANE UNLABELED	(CAS-No.) 111-84-2 (EC-No.) 203-913-4	99.997219	R10 Xn; R20 Xn; R65 Xi; R36/38 R67
2,4,4'-TRIBDE (BDE-28) UNLABELED	(CAS-No.) 41318-75-6	0.000139	Carc.Cat.1; R45 Carc.Cat.1; R49 Xn; R22 Xi; R41 Xi; R37 Xi; R38 N; R51/53
2,3',4,4'-TETRABDE (BDE-66) UNLABELED	(CAS-No.) 189084-61-5	0.000139	Carc.Cat.1; R45 Carc.Cat.1; R49 Xn; R22 Xi; R41 Xi; R37 Xi; R38 N; R51/53
2,2',4,4',5-PENTABDE (BDE-99) UNLABELED	(CAS-No.) 60348-60-9	0.000139	Carc.Cat.1; R45 Carc.Cat.1; R49 Xn; R22 Xi; R41 Xi; R37 Xi; R38 N; R51/53
2,2',3,4,4',5',6-HEPTABDE (BDE-183) UNLABELED	(CAS-No.) 207122-16-5	0.000139	Carc.Cat.1; R45 Carc.Cat.1; R49 Xn; R22 Xi; R41 Xi; R37 Xi; R38 N; R51/53
2,2',3,3',4,4',5,6'-OCTABDE (BDE-196) UNLABELED	(CAS-No.) 446255-39-6	0.000139	Xi; R37/38 N; R50/53 R67 Xn; R65
2,2',3,3',4,4',5,5',6-NONABDE (BDE-206) UNLABELED	(CAS-No.) 63387-28-0	0.000139	Carc.Cat.1; R45 Carc.Cat.1; R49 Xn; R22 Xi; R41 Xi; R37 Xi; R38 N; R51/53
2,2',4,4',5,5'-HEXABB (PBB-153) UNLABELED	(CAS-No.) 59080-40-9	0.000139	T+; R27 T; R25 Xn; R21 Xn; R22 Xi; R36 Xi; R38 R48
2,2',4-TRIBDE (BDE-17) UNLABELED	(CAS-No.) 147217-75-2	0.000139	Carc.Cat.1; R45 Carc.Cat.1; R49 Xn; R22 Xi; R41 Xi; R37 Xi; R38 N; R51/53

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Name	Product identifier	%	Classification according to Directive 67/548/EEC
2,2',4,4'-TETRABDE (BDE-47) UNLABELED	(CAS-No.) 5436-43-1 (EC-No.) 208-759-1 (EC Index-No.) 601-009-00-8	0.000139	Xn; R22 Xi; R41 Carc.Cat.1; R45 Carc.Cat.1; R49 Xi; R37 Xi; R38 N; R51/53
2,2',4,4',5,6'-HEXABDE (BDE-154) UNLABELED	(CAS-No.) 207122-15-4	0.000139	Carc.Cat.1; R45 Carc.Cat.1; R49 Xn; R22 Xi; R41 Xi; R37 Xi; R38 N; R51/53
2,2',3,3',4,4',6,6'-OCTABDE (BDE-197) UNLABELED	(CAS-No.) 117964-21-3	0.000139	Carc.Cat.1; R45 Carc.Cat.1; R49 Xn; R22 Xi; R41 Xi; R37 Xi; R38 N; R51/53
2,2',3,3',4,4',5,6,6'-NONABDE (BDE-207) UNLABELED	(CAS-No.) 437701-79-6	0.000139	Carc.Cat.1; R45 Carc.Cat.1; R49 Xn; R22 Xi; R41 Xi; R37 Xi; R38 N; R51/53
HEXABROMOBENZENE UNLABELED	(CAS-No.) 87-82-1 (EC-No.) 201-773-9 (EC Index-No.)	0.000139	Xn; R20/21/22 Xi; R36/37/38 N; R50/53
2,2',3,4,4'-PENTABDE (BDE-85) UNLABELED	(CAS-No.) 182346-21-0	0.000139	Carc.Cat.1; R45 Carc.Cat.1; R49 Xn; R22 Xi; R41 Xi; R37 Xi; R38 N; R51/53
2,2',4,4',6-PENTABDE (BDE-100) UNLABELED	(CAS-No.) 189084-64-8	0.000139	Carc.Cat.1; R45 Carc.Cat.1; R49 Xn; R22 Xi; R41 Xi; R37 Xi; R38 N; R51/53
2,2',4,4',5,5'-HEXABDE (BDE-153) UNLABELED	(CAS-No.) 68631-49-2	0.000139	Carc.Cat.1; R45 Carc.Cat.1; R49 Xn; R22 Xi; R41 Xi; R37 Xi; R38 N; R51/53
2,2',3,4,4',5,5',6-OCTABDE (BDE-203) UNLABELED	(CAS-No.) 337513-72-1	0.000139	Carc.Cat.1; R45 Carc.Cat.1; R49 Xn; R22 Xi; R41 Xi; R37 Xi; R38 N; R51/53
2,2',3,3',4,5,5',6,6'-NONABDE (BDE-208) UNLABELED	(CAS-No.) 437701-78-5	0.000139	Carc.Cat.1; R45 Carc.Cat.1; R49 Xn; R22 Xi; R41 Xi; R37 Xi; R38 N; R51/53
GAMMA-HEXABROMOCYCLODODECANE UNLABELED	(CAS-No.) 134237-52-8 (EC-No.) 221-695-9	0.000139	N; R50/53
DECABDE (BDE-209) UNLABELED	(CAS-No.) 1163-19-5 (EC-No.) 214-604-9	0.000139	Xn; R20/21/22

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1,2-BIS(PENTABROMOPHENYL)ETHANE UNLABELED	(CAS-No.) 84852-53-9 (EC-No.) 284-366-9	0.000139	Carc. Cat. 3; R40 Xn; R22 Xi; R41 N; R51/53
1,2-BIS (2,4,6-TRIBROMOPHENOXY) ETHANE UNLABELED	(CAS-No.) 37853-59-1	0.000139	Xi; R36/37/38 Xn; R22 R52/53

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
N-NONANE UNLABELED	(CAS-No.) 111-84-2 (EC-No.) 203-913-4	99.997219	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation:vapour), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H336 Asp. Tox. 1, H304
2,4,4'-TRIBDE (BDE-28) UNLABELED	(CAS-No.) 41318-75-6	0.000139	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 1A, H350 STOT SE 3, H336 Aquatic Chronic 2, H411
2,3',4,4'-TETRABDE (BDE-66) UNLABELED	(CAS-No.) 189084-61-5	0.000139	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 1A, H350 STOT SE 3, H336 Aquatic Chronic 2, H411
2,2',4,4',5-PENTABDE (BDE-99) UNLABELED	(CAS-No.) 60348-60-9	0.000139	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 1A, H350 STOT SE 3, H336 Aquatic Chronic 2, H411
2,2',3,4,4',5',6-HEPTABDE (BDE-183) UNLABELED	(CAS-No.) 207122-16-5	0.000139	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 1A, H350 STOT SE 3, H336 Aquatic Chronic 2, H411
2,2',3,3',4,4',5,6'-OCTABDE (BDE-196) UNLABELED	(CAS-No.) 446255-39-6	0.000139	Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
2,2',3,3',4,4',5,5',6-NONABDE (BDE-206) UNLABELED	(CAS-No.) 63387-28-0	0.000139	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 1A, H350 STOT SE 3, H336 Aquatic Chronic 2, H411
2,2',4,4',5,5'-HEXABB (PBB-153) UNLABELED	(CAS-No.) 59080-40-9	0.000139	Acute Tox. 3 (Oral), H301 Acute Tox. 1 (Dermal), H310 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
2,2',4-TRIBDE (BDE-17) UNLABELED	(CAS-No.) 147217-75-2	0.000139	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 1A, H350 STOT SE 3, H336 Aquatic Chronic 2, H411
2,2',4,4'-TETRABDE (BDE-47) UNLABELED	(CAS-No.) 5436-43-1 (EC-No.) 208-759-1 (EC Index-No.) 601-009-00-8	0.000139	Flam. Liq. 2, H225 Acute Tox. 1 (Oral), H300 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 1A, H350 STOT SE 3, H335 Aquatic Chronic 2, H411

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2,2',4,4',5,6'-HEXABDE (BDE-154) UNLABELED	(CAS-No.) 207122-15-4	0.000139	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 1A, H350 STOT SE 3, H336 Aquatic Chronic 2, H411
2,2',3,3',4,4',6,6'-OCTABDE (BDE-197) UNLABELED	(CAS-No.) 117964-21-3	0.000139	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 1A, H350 STOT SE 3, H336 Aquatic Chronic 2, H411
2,2',3,3',4,4',5,6,6'-NONABDE (BDE-207) UNLABELED	(CAS-No.) 437701-79-6	0.000139	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 1A, H350 STOT SE 3, H336 Aquatic Chronic 2, H411
HEXABROMOBENZENE UNLABELED	(CAS-No.) 87-82-1 (EC-No.) 201-773-9 (EC Index-No.)	0.000139	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Chronic 4, H413
2,2',3,4,4'-PENTABDE (BDE-85) UNLABELED	(CAS-No.) 182346-21-0	0.000139	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 1A, H350 STOT SE 3, H336 Aquatic Chronic 2, H411
2,2',4,4',6-PENTABDE (BDE-100) UNLABELED	(CAS-No.) 189084-64-8	0.000139	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Carc. 1A, H350 Carc. 1A, H350i STOT SE 3, H335 Aquatic Chronic 2, H411
2,2',4,4',5,5'-HEXABDE (BDE-153) UNLABELED	(CAS-No.) 68631-49-2	0.000139	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 1A, H350 STOT SE 3, H336 Aquatic Chronic 2, H411
2,2',3,4,4',5,5',6-OCTABDE (BDE-203) UNLABELED	(CAS-No.) 337513-72-1	0.000139	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 1A, H350 STOT SE 3, H336 Aquatic Chronic 2, H411
2,2',3,3',4,5,5',6'-NONABDE (BDE-208) UNLABELED	(CAS-No.) 437701-78-5	0.000139	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 1A, H350 STOT SE 3, H336 Aquatic Chronic 2, H411
GAMMA-HEXABROMOCYCLODODECANE UNLABELED	(CAS-No.) 134237-52-8 (EC-No.) 221-695-9	0.000139	Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410
DECABDE (BDE-209) UNLABELED	(CAS-No.) 1163-19-5 (EC-No.) 214-604-9	0.000139	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Inhalation:dust,mist), H332
1,2-BIS(PENTABROMOPHENYL)ETHANE UNLABELED	(CAS-No.) 84852-53-9 (EC-No.) 284-366-9	0.000139	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318 Carc. 2, H351 Aquatic Chronic 2, H411
1,2-BIS(2,4,6-TRIBROMOPHENOXY) ETHANE UNLABELED	(CAS-No.) 37853-59-1	0.000139	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Chronic 3, H412

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N-NONANE UNLABELED	(CAS-No.) 111-84-2	99.997219	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation:vapour), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H336 Asp. Tox. 1, H304
2,4,4'-TRIBDE (BDE-28) UNLABELED	(CAS-No.) 41318-75-6	0.000139	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 1A, H350 STOT SE 3, H336 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
2,3',4,4'-TETRABDE (BDE-66) UNLABELED	(CAS-No.) 189084-61-5	0.000139	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 1A, H350 STOT SE 3, H336 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
2,2',4,4',5-PENTABDE (BDE-99) UNLABELED	(CAS-No.) 60348-60-9	0.000139	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 1A, H350 STOT SE 3, H336 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
2,2',3,4,4',5',6-HEPTABDE (BDE-183) UNLABELED	(CAS-No.) 207122-16-5	0.000139	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 1A, H350 STOT SE 3, H336 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
2,2',3,3',4,4',5,6'-OCTABDE (BDE-196) UNLABELED	(CAS-No.) 446255-39-6	0.000139	Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 1, H410
2,2',3,3',4,4',5,5',6-NONABDE (BDE-206) UNLABELED	(CAS-No.) 63387-28-0	0.000139	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 1A, H350 STOT SE 3, H336 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
2,2',4,4',5,5'-HEXABB (PBB-153) UNLABELED	(CAS-No.) 59080-40-9	0.000139	Acute Tox. 3 (Oral), H301 Acute Tox. 1 (Dermal), H310 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
2,2',4-TRIBDE (BDE-17) UNLABELED	(CAS-No.) 147217-75-2	0.000139	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 1A, H350 STOT SE 3, H336 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
2,2',4,4'-TETRABDE (BDE-47) UNLABELED	(CAS-No.) 5436-43-1	0.000139	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 1A, H350 STOT SE 3, H335 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
2,2',4,4',5,6'-HEXABDE (BDE-154) UNLABELED	(CAS-No.) 207122-15-4	0.000139	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 1A, H350 STOT SE 3, H336 Aquatic Acute 2, H401 Aquatic Chronic 2, H411

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2,2',3,3',4,4',6,6'-OCTABDE (BDE-197) UNLABELED	(CAS-No.) 117964-21-3	0.000139	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 1A, H350 STOT SE 3, H336 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
2,2',3,3',4,4',5,6,6'-NONABDE (BDE-207) UNLABELED	(CAS-No.) 437701-79-6	0.000139	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 1A, H350 STOT SE 3, H336 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
HEXABROMOBENZENE UNLABELED	(CAS-No.) 87-82-1	0.000139	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Chronic 4, H413
2,2',3,4,4'-PENTABDE (BDE-85) UNLABELED	(CAS-No.) 182346-21-0	0.000139	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 1A, H350 STOT SE 3, H336 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
2,2',4,4',6-PENTABDE (BDE-100) UNLABELED	(CAS-No.) 189084-64-8	0.000139	Not classified
2,2',4,4',5,5'-HEXABDE (BDE-153) UNLABELED	(CAS-No.) 68631-49-2	0.000139	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 1A, H350 STOT SE 3, H336 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
2,2',3,4,4',5,5',6-OCTABDE (BDE-203) UNLABELED	(CAS-No.) 337513-72-1	0.000139	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 1A, H350 STOT SE 3, H336 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
2,2',3,3',4,5,5',6,6'-NONABDE (BDE-208) UNLABELED	(CAS-No.) 437701-78-5	0.000139	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 1A, H350 STOT SE 3, H336 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
GAMMA-HEXABROMOCYCLODODECANE UNLABELED	(CAS-No.) 134237-52-8	0.000139	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
DECABDE (BDE-209) UNLABELED	(CAS-No.) 1163-19-5	0.000139	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation:gas), H332
1,2-BIS(PENTABROMOPHENYL)ETHANE UNLABELED	(CAS-No.) 84852-53-9	0.000139	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318 Carc. 2, H351 Aquatic Chronic 2, H411
1,2-BIS (2,4,6-TRIBROMOPHENOXY) ETHANE UNLABELED	(CAS-No.) 37853-59-1	0.000139	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335 Aquatic Acute 3, H402 Aquatic Chronic 3, H412

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

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Call a physician immediately.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor/physician if you feel unwell. Give oxygen or artificial respiration if necessary.
First-aid measures after skin contact	: Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. If skin irritation occurs: Get medical advice/attention.

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- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : Do not induce vomiting. Call a physician immediately.

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

- Symptoms/effects : May cause drowsiness or dizziness.
- Symptoms/effects after inhalation : Harmful if inhaled. May cause respiratory irritation.
- Symptoms/effects after skin contact : Causes skin irritation. May be harmful in contact with skin.
- Symptoms/effects after eye contact : Causes serious eye irritation.
- Symptoms/effects after ingestion : May be fatal if swallowed and enters airways. Risk of lung edema.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide. Alcohol resistant foam.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Flammable liquid and vapour.
- Reactivity : Flammable liquid and vapour. vapors may form flammable mixture with air.

5.3. Advice for firefighters

- Firefighting instructions : Do not enter fire area without proper protective equipment, including respiratory protection.
- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures : Wear personal protective equipment. Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid breathing fume, gas, mist, spray, vapors. Avoid contact with skin and eyes.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Prevent entry to sewers and public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- For containment : Dike and contain spill. Dispose as hazardous waste. Comply with local regulations for disposal.
- Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
- Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Avoid all contact with skin, eyes, or clothing. Keep away from sources of ignition - No smoking. Do not breathe gas/fumes/vapor/spray (appropriate wording to be specified by the manufacturer). Take precautionary measures against static discharges.
- Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapors may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing fume, gas, mist, spray, vapors. Avoid contact with skin and eyes.
- Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Store in a well-ventilated place. Keep container tightly closed. Keep dry. Ground/bond container and receiving equipment.
- Storage conditions : Store at room temperature away from light and moisture.

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7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

BFR PAR SOLUTION UNLABELED 1000 NG/ML IN NONANE		
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	200.00000000 ppm USA. ACGIH Threshold Limit Values (TLV)
Italy - Portugal - USA ACGIH	Remark (ACGIH)	CNS impair
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	1050 mg/m ³ USA. NIOSH Recommended Exposure Limits
USA NIOSH	NIOSH REL (TWA) (ppm)	200 ppm USA. NIOSH Recommended Exposure Limits
USA NIOSH	Remark (NIOSH)	Central Nervous System impairment
USA OSHA	OSHA PEL (TWA) (mg/m ³)	1050 mg/m ³ USA. OSHA - Table Z-1 Limits for Air Contaminants - 1910.1000
USA OSHA	OSHA PEL (TWA) (ppm)	200 ppm USA. OSHA - Table Z-1 Limits for Air Contaminants - 1910.1000
USA OSHA	OSHA PEL (Ceiling) (mg/m ³)	1050 California permissible exposure limits for chemical contaminants.
USA OSHA	OSHA PEL (Ceiling) (ppm)	200 ppm California permissible exposure limits for chemical contaminants.

DECABDE (BDE-209) UNLABELED (1163-19-5)

USA OSHA	OSHA PEL (TWA) (mg/m ³)	5 mg/m ³
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1,2-BIS(PENTABROMOPHENYL)ETHANE UNLABELED (84852-53-9)

Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	15 mg/m ³

N-NONANE UNLABELED (111-84-2)

Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	200.00000000 ppm USA. ACGIH Threshold Limit Values (TLV)
Italy - Portugal - USA ACGIH	Remark (ACGIH)	CNS impair
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	1050 mg/m ³ USA. NIOSH Recommended Exposure Limits
USA NIOSH	NIOSH REL (TWA) (ppm)	200 ppm USA. NIOSH Recommended Exposure Limits
USA NIOSH	Remark (NIOSH)	Central Nervous System impairment
USA OSHA	OSHA PEL (TWA) (mg/m ³)	1050 mg/m ³ USA. OSHA - Table Z-1 Limits for Air Contaminants - 1910.1000
USA OSHA	OSHA PEL (TWA) (ppm)	200 ppm USA. OSHA - Table Z-1 Limits for Air Contaminants - 1910.1000
USA OSHA	OSHA PEL (Ceiling) (mg/m ³)	1050 California permissible exposure limits for chemical contaminants.
USA OSHA	OSHA PEL (Ceiling) (ppm)	200 ppm California permissible exposure limits for chemical contaminants.

1,2-BIS (2,4,6-TRIBROMOPHENOXY) ETHANE UNLABELED (37853-59-1)

Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	15

8.2. Exposure controls

Appropriate engineering controls

: Ensure good ventilation of the work station.

Personal protective equipment

: Protective clothing. Protective goggles. Gloves. Self-contained breathing apparatus.



Materials for protective clothing

: Wear suitable protective clothing and gloves.

Hand protection

: protective gloves.

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Eye protection	: Chemical goggles or face shield. Chemical goggles or safety glasses.
Skin and body protection	: Wear suitable protective clothing, gloves and eye/face protection.
Respiratory protection	: Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. Approved respirator.
Environmental exposure controls	: Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

The properties listed below are for the solvent, the main component of this mixture.

Physical state	: Liquid
Appearance	: Liquid
Molecular mass	: 128.3 g/mol
Color	: Colorless
Odor	: No data available
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: Not applicable
Freezing point	: -53 °C (- 63 °F) - lit
Boiling point	: 151 °C (304 °F) - lit
Flash point	: 31 °C (87.8 °F) - closed cup
Auto-ignition temperature	: 205 °C (401 °F)
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapor pressure	: 5.69 hPa (4.27 mmHg) at 25 °C (77 °F)
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Specific gravity / density	: 0.718 g/ml at 25 °C (77 °F)
Solubility	: Water: 0.0002 % at 25 °C (77 °F) - slightly soluble
Log Pow	: 5.65
Log Kow	: No data available
Viscosity, kinematic	: <= 1.008 mm ² /s at 20 °C (68 °F)
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosion limits	: 0.87 - 2.9 % (V)

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable liquid and vapour. vapors may form flammable mixture with air.

10.2. Chemical stability

See storage and expiration date on CoA.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Carbon oxides (CO, CO₂).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not classified
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BFR PAR SOLUTION UNLABELED 1000 NG/ML IN NONANE	
LC50 inhalation rat (mg/l)	23760 mg/m ³ male - 4 h
ATE CLP (vapors)	23.760 mg/l/4h
ATE CLP (dust, mist)	23.760 mg/l/4h
Skin corrosion/irritation, Dermal, rat	Result: Skin Irritation (Draize Test)
Additional information	: S. Typhimurium Result: negative
2,2',4,4',5,5'-HEXABB (PBB-153) UNLABELED (59080-40-9)	
ATE CLP (oral)	100.000 mg/kg body weight
ATE CLP (dermal)	5.000 mg/kg body weight
2,2',4,4'-TETRABDE (BDE-47) UNLABELED (5436-43-1)	
ATE CLP (oral)	0.500 mg/kg body weight
HEXABROMOBENZENE UNLABELED (87-82-1)	
LD50 oral rat	225 mg/kg
ATE CLP (oral)	500.000 mg/kg body weight
ATE CLP (dermal)	1100.000 mg/kg body weight
ATE CLP (gases)	4500.000 ppmV/4h
ATE CLP (vapors)	11.000 mg/l/4h
ATE CLP (dust, mist)	1.500 mg/l/4h
2,2',4,4',6-PENTABDE (BDE-100) UNLABELED (189084-64-8)	
ATE CLP (oral)	500.000 mg/kg body weight
GAMMA-HEXABROMOCYCLODODECANE UNLABELED (134237-52-8)	
LD50 oral rat	> 20000 mg/kg
DECABDE (BDE-209) UNLABELED (1163-19-5)	
ATE CLP (oral)	500.000 mg/kg body weight
ATE CLP (dermal)	1100.000 mg/kg body weight
ATE CLP (gases)	4500.000 ppmV/4h
ATE CLP (vapors)	11.000 mg/l/4h
ATE CLP (dust, mist)	1.500 mg/l/4h
1,2-BIS(PENTABROMOPHENYL)ETHANE UNLABELED (84852-53-9)	
LD50 oral rat	2000 mg/kg
LD50 oral	> 5000 mg/kg
LD50 dermal rabbit	> 5000 mg/kg
ATE CLP (oral)	2000.000 mg/kg body weight
N-NONANE UNLABELED (111-84-2)	
LC50 inhalation rat (mg/l)	23760 mg/m ³ male - 4 h
ATE CLP (vapors)	11.000 mg/l/4h
Skin corrosion/irritation, Dermal, rat	Result: Skin Irritation (Draize Test)
Additional information	: S. Typhimurium Result: negative
1,2-BIS (2,4,6-TRIBROMOPHENOXY) ETHANE UNLABELED (37853-59-1)	
LD50 oral rat	> 10 g/kg
LD50 dermal rabbit	> 10 g/kg
LC50 inhalation rat (mg/l)	36.68 mg/l
ATE CLP (oral)	500.000 mg/kg body weight
ATE CLP (vapors)	36.680 mg/l/4h
ATE CLP (dust, mist)	36.680 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	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: May cause drowsiness or dizziness.
Specific target organ toxicity – repeated exposure	: Not classified
BFR PAR SOLUTION UNLABELED 1000 NG/ML IN NONANE	
NOAEL (oral,rat,90 days)	100 mg/kg bodyweight/day female (OECD Test Guideline 408)

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N-NONANE UNLABELED (111-84-2)

NOAEL (oral,rat,90 days)	100 mg/kg bodyweight/day female (OECD Test Guideline 408)
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Aspiration hazard	: May be fatal if swallowed and enters airways.
Potential Adverse human health effects and symptoms	: 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.
Symptoms/effects after inhalation	: Harmful if inhaled. May cause respiratory irritation.
Symptoms/effects after skin contact	: Causes skin irritation. May be harmful in contact with skin.
Symptoms/effects after eye contact	: Causes serious eye irritation.
Symptoms/effects after ingestion	: May be fatal if swallowed and enters airways. Risk of lung edema.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

BFR PAR SOLUTION UNLABELED 1000 NG/ML IN NONANE

EC50 Daphnia 1	0.2 mg/l static test EC50 - Daphnia magna (Water flea) - 48 h
----------------	---------------------------------------------------------------

GAMMA-HEXABROMOCYCLODODECANE UNLABELED (134237-52-8)

LC50 fish 1	0.003 mg/l Oncorhynchus mykiss(rainbow trout) - 96 h
EC50 Daphnia 1	> 3.2 mg/l Daphnia - 48 h
ErC50 (algae)	0.009 mg/l Algae - 72 h

1,2-BIS(PENTABROMOPHENYL)ETHANE UNLABELED (84852-53-9)

LC50 fish 1	>10,000 mg/l - 96h
ErC50 (algae)	> 10,000 mg/l - Daphnia magna (Waterflea)- 48h

N-NONANE UNLABELED (111-84-2)

EC50 Daphnia 1	0.2 mg/l static test EC50 - Daphnia magna (Water flea) - 48 h
----------------	---------------------------------------------------------------

1,2-BIS (2,4,6-TRIBROMOPHENOXY) ETHANE UNLABELED (37853-59-1)

LC50 fish 1	> 3160 mg/l Bluegill - 24 h
LC50 other aquatic organisms 1	230 mg/l Oryzias latipes - 48 h
LC50 fish 2	> 3160 mg/l Rainbow trout - 24 h
LC50 other aquatic organisms 2	5.573 mg/l Mysid shrimp - 96 h
ErC50 (algae)	33.66 mg/l Algae - 96 h

12.2. Persistence and degradability

2,2',3,3',4,4',5,6'-OCTABDE (BDE-196) UNLABELED (446255-39-6)

Persistence and degradability	Not available.
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2,2',3,3',4,4',5,5',6'-NONABDE (BDE-206) UNLABELED (63387-28-0)

Persistence and degradability	Not available.
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2,2',4,4',5,5'-HEXABB (PBB-153) UNLABELED (59080-40-9)

Persistence and degradability	No data available.
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2,2',3,3',4,4',6,6'-OCTABDE (BDE-197) UNLABELED (117964-21-3)

Persistence and degradability	Not available. May cause long-term adverse effects in the environment.
-------------------------------	------------------------------------------------------------------------

2,2',3,3',4,4',5,6'-NONABDE (BDE-207) UNLABELED (437701-79-6)

Persistence and degradability	Not available.
-------------------------------	----------------

HEXABROMOBENZENE UNLABELED (87-82-1)

Persistence and degradability	May cause long-term adverse effects in the environment.
-------------------------------	---------------------------------------------------------

2,2',3,4,4'-PENTABDE (BDE-85) UNLABELED (182346-21-0)

Persistence and degradability	Not available.
-------------------------------	----------------

2,2',3,4,4',5,5',6'-OCTABDE (BDE-203) UNLABELED (337513-72-1)

Persistence and degradability	Not available.
-------------------------------	----------------

2,2',3,3',4,5,5',6,6'-NONABDE (BDE-208) UNLABELED (437701-78-5)

Persistence and degradability	Not available.
-------------------------------	----------------

1,2-BIS(PENTABROMOPHENYL)ETHANE UNLABELED (84852-53-9)

Persistence and degradability	Not available.
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1,2-BIS (2,4,6-TRIBROMOPHENOXY) ETHANE UNLABELED (37853-59-1)

Persistence and degradability	Biodegradability: Result: - Not readily biodegradable.
-------------------------------	--------------------------------------------------------

12.3. Bioaccumulative potential

BFR PAR SOLUTION UNLABELED 1000 NG/ML IN NONANE

Log Pow	5.65
Bioaccumulative potential	Indication of bioaccumulation.

2,2',3,3',4,4',5,5',6'-OCTABDE (BDE-196) UNLABELED (446255-39-6)

Bioaccumulative potential	Not available.
---------------------------	----------------

2,2',3,3',4,4',5,5',6'-NONABDE (BDE-206) UNLABELED (63387-28-0)

Bioaccumulative potential	Not available.
---------------------------	----------------

2,2',4,4',5,5'-HEXABB (PBB-153) UNLABELED (59080-40-9)

Bioaccumulative potential	No data available.
---------------------------	--------------------

2,2',3,3',4,4',6,6'-OCTABDE (BDE-197) UNLABELED (117964-21-3)

Bioaccumulative potential	Not available.
---------------------------	----------------

2,2',3,3',4,4',5,5',6'-NONABDE (BDE-207) UNLABELED (437701-79-6)

Bioaccumulative potential	Not available.
---------------------------	----------------

HEXABROMOBENZENE UNLABELED (87-82-1)

Log Pow	6.278
---------	-------

2,2',3,4,4'-PENTABDE (BDE-85) UNLABELED (182346-21-0)

Bioaccumulative potential	Not available.
---------------------------	----------------

2,2',3,4,4',5,5',6'-OCTABDE (BDE-203) UNLABELED (337513-72-1)

Bioaccumulative potential	Not available.
---------------------------	----------------

2,2',3,3',4,5,5',6,6'-NONABDE (BDE-208) UNLABELED (437701-78-5)

Bioaccumulative potential	Not available.
---------------------------	----------------

GAMMA-HEXABROMOCYCLODODECANE UNLABELED (134237-52-8)

Bioaccumulative potential	Not available.
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1,2-BIS(PENTABROMOPHENYL)ETHANE UNLABELED (84852-53-9)

Bioaccumulative potential	Bioaccumulation is unlikely.
---------------------------	------------------------------

N-NONANE UNLABELED (111-84-2)

Log Pow	5.65
Bioaccumulative potential	Indication of bioaccumulation.

1,2-BIS (2,4,6-TRIBROMOPHENOXY) ETHANE UNLABELED (37853-59-1)

Log Pow	3.317
Log Kow	8.9

12.4. Mobility in soil

2,2',3,3',4,4',5,5',6'-OCTABDE (BDE-196) UNLABELED (446255-39-6)

Ecology - soil	Not available.
----------------	----------------

2,2',3,3',4,4',5,5',6'-NONABDE (BDE-206) UNLABELED (63387-28-0)

Ecology - soil	Not available.
----------------	----------------

2,2',4,4',5,5'-HEXABB (PBB-153) UNLABELED (59080-40-9)

Ecology - soil	No data available.
----------------	--------------------

2,2',3,3',4,4',6,6'-OCTABDE (BDE-197) UNLABELED (117964-21-3)

Ecology - soil	Not available.
----------------	----------------

2,2',3,3',4,4',5,5',6'-NONABDE (BDE-207) UNLABELED (437701-79-6)

Ecology - soil	Not available.
----------------	----------------

2,2',3,4,4'-PENTABDE (BDE-85) UNLABELED (182346-21-0)

Ecology - soil	Not available.
----------------	----------------

2,2',3,4,4',5,5',6'-OCTABDE (BDE-203) UNLABELED (337513-72-1)

Ecology - soil	Not available.
----------------	----------------

2,2',3,3',4,5,5',6,6'-NONABDE (BDE-208) UNLABELED (437701-78-5)

Ecology - soil	Not available.
----------------	----------------

GAMMA-HEXABROMOCYCLODODECANE UNLABELED (134237-52-8)

Ecology - soil	Not available.
----------------	----------------

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1,2-BIS(PENTABROMOPHENYL)ETHANE UNLABELED (84852-53-9)

Ecology - soil : Not available.

12.5. Results of PBT and vPvB assessment

GAMMA-HEXABROMOCYCLODODECANE UNLABELED (134237-52-8)

This substance/mixture meets the PBT criteria of REACH, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH, annex XIII

DECABDE (BDE-209) UNLABELED (1163-19-5)

This substance/mixture meets the PBT criteria of REACH, annex XIII

This substance/mixture meets the vPvB criteria of REACH, annex XIII

12.6. Other adverse effects

No additional information available

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.
- Product/Packaging disposal recommendations : Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.
- Ecology - waste materials : Dispose of as unused product.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

- UN-No.(DOT) : 1920
- DOT NA no. : UN1920

14.2. UN proper shipping name

- Proper Shipping Name (DOT) : Nonanes
- Class (DOT) : 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

- Emergency Response Guide (ERG) Number : 128
- Other information : No supplementary information available.

Overland transport

- Packing group (ADR) : III

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



Orange plates



Tunnel restriction code (ADR) : 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)
Civil Aeronautics Law : Flammable liquids

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

BFR PAR SOLUTION UNLABELED 1000 NG/ML IN NONANE	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313.
2,4,4'-TRIBDE (BDE-28) UNLABELED (41318-75-6)	
SARA Section 302 Threshold Planning Quantity (TPQ)	SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313
2,2',3,4,4',5',6-HEPTABDE (BDE-183) UNLABELED (207122-16-5)	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313
2,2',3,3',4,4',5,6'-OCTABDE (BDE-196) UNLABELED (446255-39-6)	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313

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2,2',4,4',5,5'-HEXABB (PBB-153) UNLABELED (59080-40-9)	
SARA Section 302 Threshold Planning Quantity (TPQ)	SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313
2,2',4,4'-TETRABDE (BDE-47) UNLABELED (5436-43-1)	
SARA Section 302 Threshold Planning Quantity (TPQ)	SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313
2,2',3,3',4,4',6,6'-OCTABDE (BDE-197) UNLABELED (117964-21-3)	
SARA Section 302 Threshold Planning Quantity (TPQ)	SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313
HEXABROMOBENZENE UNLABELED (87-82-1)	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313.
DECABDE (BDE-209) UNLABELED (1163-19-5)	
SARA Section 302 Threshold Planning Quantity (TPQ)	SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA Section 313 - Emission Reporting	Subject to reporting requirements of United States SARA Section 313
1,2-BIS(PENTABROMOPHENYL)ETHANE UNLABELED (84852-53-9)	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313.
N-NONANE UNLABELED (111-84-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313.

15.2. International regulations

CANADA

BFR PAR SOLUTION UNLABELED 1000 NG/ML IN NONANE	
Listed on the Canadian DSL (Domestic Substances List)	
N-NONANE UNLABELED (111-84-2)	
Listed on the Canadian DSL (Domestic Substances List)	

15.2.1. National regulations

No additional information available

15.3. US State regulations

BFR PAR SOLUTION UNLABELED 1000 NG/ML IN NONANE()	
U.S. - California - Proposition 65 - Carcinogens List	No
U.S. - California - Proposition 65 - Developmental Toxicity	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No

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BFR PAR SOLUTION UNLABELED 1000 NG/ML IN NONANE()				
State or local regulations		U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Massachusetts - Right To Know List U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances		
2,4,4'-TRIBDE (BDE-28) UNLABELED (41318-75-6)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
2,3',4,4'-TETRABDE (BDE-66) UNLABELED (189084-61-5)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
2,2',4,4',5-PENTABDE (BDE-99) UNLABELED (60348-60-9)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
2,2',3,4,4',5',6-HEPTABDE (BDE-183) UNLABELED (207122-16-5)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
2,2',3,3',4,4',5,6'-OCTABDE (BDE-196) UNLABELED (446255-39-6)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
2,2',3,3',4,4',5,5',6-NONABDE (BDE-206) UNLABELED (63387-28-0)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
2,2',4,4',5,5'-HEXABB (PBB-153) UNLABELED (59080-40-9)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	Yes	Yes	Yes	
2,2',4-TRIBDE (BDE-17) UNLABELED (147217-75-2)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
2,2',4,4'-TETRABDE (BDE-47) UNLABELED (5436-43-1)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	

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2,2',4,4'-TETRABDE (BDE-47) UNLABELED (5436-43-1)				
No	No	No	No	
2,2',4,4',5,6'-HEXABDE (BDE-154) UNLABELED (207122-15-4)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
2,2',3,3',4,4',6,6'-OCTABDE (BDE-197) UNLABELED (117964-21-3)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
2,2',3,3',4,4',5,6,6'-NONABDE (BDE-207) UNLABELED (437701-79-6)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
HEXABROMOBENZENE UNLABELED (87-82-1)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
2,2',3,4,4'-PENTABDE (BDE-85) UNLABELED (182346-21-0)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
2,2',4,4',6-PENTABDE (BDE-100) UNLABELED (189084-64-8)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
2,2',4,4',5,5'-HEXABDE (BDE-153) UNLABELED (68631-49-2)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
2,2',3,4,4',5,5',6-OCTABDE (BDE-203) UNLABELED (337513-72-1)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
2,2',3,3',4,5,5',6,6'-NONABDE (BDE-208) UNLABELED (437701-78-5)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	

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GAMMA-HEXABROMOCYCLODODECANE UNLABELED (134237-52-8)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
DECABDE (BDE-209) UNLABELED (1163-19-5)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
1,2-BIS(PENTABROMOPHENYL)ETHANE UNLABELED (84852-53-9)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
N-NONANE UNLABELED (111-84-2)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
1,2-BIS (2,4,6-TRIBROMOPHOXY) ETHANE UNLABELED (37853-59-1)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
2,4,4'-TRIBDE (BDE-28) UNLABELED (41318-75-6)				
State or local regulations				
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				
2,3',4,4'-TETRABDE (BDE-66) UNLABELED (189084-61-5)				
State or local regulations				
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				
2,2',4,4',5-PENTABDE (BDE-99) UNLABELED (60348-60-9)				
State or local regulations				
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				
2,2',3,4,4',5,6-HEPTABDE (BDE-183) UNLABELED (207122-16-5)				
State or local regulations				
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.				
2,2',3,3',4,4',5,6'-OCTABDE (BDE-196) UNLABELED (446255-39-6)				
State or local regulations				
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List				

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2,2',3,3',4,4',5,5',6-NONABDE (BDE-206) UNLABELED (63387-28-0)

State or local regulations

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

2,2',4,4',5,5'-HEXABB (PBB-153) UNLABELED (59080-40-9)

State or local regulations

U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - New Jersey - Right to Know Hazardous Substance List

2,2',4-TRIBDE (BDE-17) UNLABELED (147217-75-2)

State or local regulations

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

2,2',4,4'-TETRABDE (BDE-47) UNLABELED (5436-43-1)

State or local regulations

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

2,2',4,4',5,6'-HEXABDE (BDE-154) UNLABELED (207122-15-4)

State or local regulations

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

2,2',3,3',4,4',6,6'-OCTABDE (BDE-197) UNLABELED (117964-21-3)

State or local regulations

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

2,2',3,3',4,4',5,6'-NONABDE (BDE-207) UNLABELED (437701-79-6)

State or local regulations

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

HEXABROMOBENZENE UNLABELED (87-82-1)

State or local regulations

U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - New Jersey - Right to Know Hazardous Substance List

2,2',3,4,4'-PENTABDE (BDE-85) UNLABELED (182346-21-0)

State or local regulations

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

2,2',4,4',6-PENTABDE (BDE-100) UNLABELED (189084-64-8)

State or local regulations

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

2,2',4,4',5,5'-HEXABDE (BDE-153) UNLABELED (68631-49-2)

State or local regulations

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

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2,2',3,4,4',5,5',6-OCTABDE (BDE-203) UNLABELED (337513-72-1)

State or local regulations

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

2,2',3,3',4,5,5',6,6'-NONABDE (BDE-208) UNLABELED (437701-78-5)

State or local regulations

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

GAMMA-HEXABROMOCYCLODODECANE UNLABELED (134237-52-8)

State or local regulations

U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - New Jersey - Right to Know Hazardous Substance List

DECABDE (BDE-209) UNLABELED (1163-19-5)

State or local regulations

U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

N-NONANE UNLABELED (111-84-2)

State or local regulations

U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Massachusetts - Right To Know List
U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances

1,2-BIS (2,4,6-TRIBROMOPHOXY) ETHANE UNLABELED (37853-59-1)

State or local regulations

U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Other information : This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the corresponding unlabeled compound.

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

Acute Tox. 1 (Dermal)	Acute toxicity (dermal) Category 1
Acute Tox. 1 (Oral)	Acute toxicity (oral) Category 1
Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) 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 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment - Chronic Hazard Category 3
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. 1A	Carcinogenicity (inhalation) Category 1A
Carc. 2	Carcinogenicity Category 2
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Flam. Liq. 2	Flammable liquids Category 2
Flam. Liq. 3	Flammable liquids Category 3

BFR PAR SOLUTION UNLABELED 1000 NG/ML IN NONANE

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Skin Irrit. 2	Skin corrosion/irritation Category 2
Skin Sens. 1	Skin sensitization, Category 1
STOT RE 2	Specific target organ toxicity (repeated 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 vapour
H226	Flammable liquid and vapour
H300	Fatal if swallowed
H301	Toxic if swallowed
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H310	Fatal in contact with skin
H312	Harmful in contact with skin
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H319	Causes serious eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H350	May cause cancer
H350i	May cause cancer by inhalation.
H351	Suspected of causing cancer
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
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects
H413	May cause long lasting harmful effects to aquatic life
R10	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
R25	Toxic if swallowed
R27	Very toxic in contact with skin
R36	Irritating to eyes
R36/37/38	Irritating to eyes, respiratory system and skin
R36/38	Irritating to eyes and skin
R37	Irritating to respiratory system
R37/38	Irritating to respiratory system and skin
R38	Irritating to skin
R40	Limited evidence of a carcinogenic effect
R41	Risk of serious damage to eyes
R45	May cause cancer
R48	Danger of serious damage to health by prolonged exposure
R49	May cause cancer by inhalation
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R65	Harmful: may cause lung damage if swallowed
R67	Vapors may cause drowsiness and dizziness
N	Dangerous for the environment
T	Toxic
T+	Very toxic
Xi	Irritant
Xn	Harmful

NFPA health hazard

: 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard

: 3 - Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions.

BFR PAR SOLUTION UNLABELED 1000 NG/ML IN NONANE

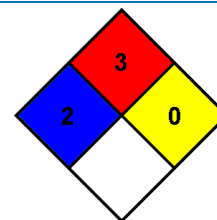
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NFPA reactivity

: 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating

Health

: 2 Moderate Hazard - Temporary or minor injury may occur

Flammability

: 3 Serious Hazard

Physical

: 0 Minimal Hazard

CIL 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