



# MONO-DECA + PREDOMINANT PCB SYRINGE SPIKE (13C12, 99%) IN NONANE

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations  
Issue date: 1/8/2016 Revision date: 7/6/2023 Supersedes: 1/8/2016 Version: 2.0

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
Product name : MONO-DECA + PREDOMINANT PCB SYRINGE SPIKE (13C12, 99%) IN NONANE  
Product code : EC-5415

#### 1.2. Recommended use and restrictions on use

No additional information available

#### 1.3. Supplier

Cambridge Isotope Laboratories, Inc.  
50 Frontage Rd  
01810  
ANDOVER, MA, 01810  
USA  
T 1-800-322-1174  
[cilsales@isotope.com](mailto:cilsales@isotope.com) - [www.isotope.com](http://www.isotope.com)

#### 1.4. Emergency telephone number

Emergency number : 1-703-741-5970  
Chemtrec 1-800-424-9300 24 hours

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS US classification

Flammable liquids Category 3	H226	Flammable liquid and vapor
Acute toxicity (inhalation) Category 4	H332	Harmful if inhaled
Skin corrosion/irritation Category 2	H315	Causes skin irritation
Serious eye damage/eye irritation Category 2A	H319	Causes serious eye irritation
Specific target organ toxicity – Single exposure, Category 3, Narcosis	H336	May cause drowsiness or dizziness
Aspiration hazard Category 1	H304	May be fatal if swallowed and enters airways

Full text of H statements : see section 16

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Danger

Hazard statements (GHS US) :

H226 - Flammable liquid and vapor  
H304 - May be fatal if swallowed and enters airways  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H332 - Harmful if inhaled  
H336 - May cause drowsiness or dizziness

# MONO-DECA + PREDOMINANT PCB SYRINGE SPIKE (13C12, 99%) IN NONANE

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Precautionary statements (GHS US)	: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. heat, hot surfaces, open flames, sparks 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. P280 - Wear protective clothing, protective gloves. P301+P310 - If swallowed: Immediately call a poison center or doctor. 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 poison center or doctor if you feel unwell. P321 - Specific treatment (see Hazard pictograms (CLP) 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 - Take off contaminated clothing and wash before reuse. P370+P378 - In case of fire: Use Alcohol resistant foam, Carbon dioxide, Dry chemical, Water spray 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 Comply with applicable regulations.
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### 2.3. Other hazards which do not result in classification

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	GHS US classification
N-NONANE UNLABELED	CAS-No.: 111-84-2	99.9986	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

# MONO-DECA + PREDOMINANT PCB SYRINGE SPIKE (13C12, 99%) IN NONANE

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Name	Product identifier	%	GHS US classification
2,4',6-TRICB (PCB-32) (13C12, 99%)	CAS-No.: 38444-77-8 (Unlabeled)	0.00028	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
2,3',4',5-TETRACB (PCB-70) (13C12, 99%)	CAS-No.: 208263-81-4	0.00028	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
2,2',3,3',4,4',5-HEPTACB (PCB-170) (13C12, 99%)	CAS-No.: 35065-30-6 (Unlabeled)	0.00028	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
2,2',3,3',4,4'-HEXACB (PCB-128) (13C12, 99%)	CAS-No.: 38380-07-3 (Unlabeled)	0.00028	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
3,3',4,5,5'-PENTACB (PCB-127) (13C12, 99%)	CAS-No.: 39635-33-1 (Unlabeled)	0.00028	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of hazard classes and H-statements : 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	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
First-aid measures after skin contact	: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash with plenty of soap and water. Wash contaminated clothing before reuse. Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Immediately call a poison center or doctor/physician.

### 4.2. Most important symptoms and effects (acute and delayed)

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. Harmful if inhaled.
Symptoms/effects after inhalation	: Danger of serious damage to health by prolonged exposure through inhalation. Harmful if inhaled. May cause drowsiness or dizziness.
Symptoms/effects after skin contact	: Causes skin irritation.
Symptoms/effects after eye contact	: Causes serious eye irritation.
Symptoms/effects after ingestion	: May be fatal if swallowed and enters airways.

### 4.3. Immediate medical attention and special treatment, if necessary

No additional information available

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

# MONO-DECA + PREDOMINANT PCB SYRINGE SPIKE (13C12, 99%) IN NONANE

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Specific hazards arising from the chemical

Fire hazard : Flammable liquid and vapor.  
Explosion hazard : May form flammable/explosive vapor-air mixture.

### 5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering 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

General measures : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.

#### 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. Avoid breathing dust, mist or spray.  
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

For containment : For large spills, confine the spill in a dike and charge it with wet sand or earth for subsequent safe disposal. Dike and contain spill. Dispose as hazardous waste. Comply with local regulations for disposal. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal.  
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

Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.  
Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. No open flames. No smoking. Take precautionary measures against static discharge. Use only non-sparking tools. Use only outdoors or in a well-ventilated area. Avoid breathing dust, mist or spray.  
Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

# MONO-DECA + PREDOMINANT PCB SYRINGE SPIKE (13C12, 99%) IN NONANE

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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

Technical measures	: Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical equipment.
Storage conditions	: Store at room temperature away from light and moisture.
Incompatible products	: Strong bases. Strong acids.
Incompatible materials	: Sources of ignition. Direct sunlight. Heat sources.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

MONO-DECA + PREDOMINANT PCB SYRINGE SPIKE (13C12, 99%) IN NONANE	
No additional information available	
<b>2,4',6-TRICB (PCB-32) (13C12, 99%) (38444-77-8 (Unlabeled))</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
ACGIH chemical category	No component of this product present at levels greater than or equal to 0.1% is identifiable as a carcinogen or potential carcinogen by ACGIH.
<b>2,3',4',5-TETRACB (PCB-70) (13C12, 99%) (208263-81-4)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
ACGIH chemical category	No component of this product present at levels greater than or equal to 0.1% is identifiable as a carcinogen or potential carcinogen by ACGIH.
<b>2,2',3,3',4,4',5-HEPTACB (PCB-170) (13C12, 99%) (35065-30-6 (Unlabeled))</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
ACGIH chemical category	No component of this product present at levels greater than or equal to 0.1% is identifiable as a carcinogen or potential carcinogen by ACGIH.
<b>N-NONANE UNLABELED (111-84-2)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
Local name	Nonane
ACGIH OEL TWA [ppm]	200 ppm USA. ACGIH Threshold Limit Values (TLV)
Remark (ACGIH)	CNS impair
ACGIH chemical category	No component of this product present at levels greater than or equal to 0.1% is identifiable as a carcinogen or potential carcinogen by ACGIH.
<b>USA - OSHA - Occupational Exposure Limits</b>	
OSHA PEL TWA [1]	1050 mg/m <sup>3</sup> USA. OSHA - Table Z-1 Limits for Air Contaminants - 1910.1000
OSHA PEL TWA [2]	200 ppm USA. OSHA - Table Z-1 Limits for Air Contaminants - 1910.1000
OSHA PEL C	1050 California permissible exposure limits for chemical contaminants.
OSHA PEL C [ppm]	200 ppm California permissible exposure limits for chemical contaminants.
<b>USA - NIOSH - Occupational Exposure Limits</b>	
NIOSH REL TWA	1050 mg/m <sup>3</sup> USA. NIOSH Recommended Exposure Limits
NIOSH REL TWA [ppm]	200 ppm USA. NIOSH Recommended Exposure Limits
Remark (NIOSH)	Central Nervous System impairment

# MONO-DECA + PREDOMINANT PCB SYRINGE SPIKE (13C12, 99%) IN NONANE

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 2,2',3,3',4,4'-HEXACB (PCB-128) (13C12, 99%) (38380-07-3 (Unlabeled))

#### USA - ACGIH - Occupational Exposure Limits

ACGIH chemical category	No component of this product present at levels greater than or equal to 0.1% is identifiable as a carcinogen or potential carcinogen by ACGIH.
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### 3,3',4,5,5'-PENTACB (PCB-127) (13C12, 99%) (39635-33-1 (Unlabeled))

#### USA - ACGIH - Occupational Exposure Limits

ACGIH chemical category	No component of this product present at levels greater than or equal to 0.1% is identifiable as a carcinogen or potential carcinogen by ACGIH.
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## 8.2. Appropriate engineering controls

No additional information available

## 8.3. Individual protection measures/Personal protective equipment

### Personal protective equipment:

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

#### Hand protection:

Wear protective gloves.

#### Eye protection:

Chemical goggles or safety glasses

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. Wear respiratory protection.

### Personal protective equipment symbol(s):



### Other information:

Do not eat, drink or smoke during use.

## 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
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

# MONO-DECA + PREDOMINANT PCB SYRINGE SPIKE (13C12, 99%) IN NONANE

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Flammable liquid and vapor.
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
Density	: 0.718 g/ml at 25 °C (77 °F)
Molecular mass	: 128.3 g/mol
Solubility	: Water: 0.0002 %
Partition coefficient n-octanol/water (Log Pow)	: 5.65
Auto-ignition temperature	: 205 °C (401 °F)
Decomposition temperature	: No data available
Viscosity, kinematic	: ≤ 1.008 mm <sup>2</sup> /s at 20 °C (68 °F)
Viscosity, dynamic	: No data available
Explosion limits	: 0.87 – 2.9 % (V)
Explosive properties	: No data available
Oxidizing properties	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Vapor is explosive with air above.

### 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. Open flame. Overheating. Heat. Sparks.

### 10.5. Incompatible materials

Strong acids. Strong bases.

### 10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide. May release flammable gases.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Harmful if inhaled.

### MONO-DECA + PREDOMINANT PCB SYRINGE SPIKE (13C12, 99%) IN NONANE

ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	11 mg/l/4h

# MONO-DECA + PREDOMINANT PCB SYRINGE SPIKE (13C12, 99%) IN NONANE

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<b>MONO-DECA + PREDOMINANT PCB SYRINGE SPIKE (13C12, 99%) IN NONANE</b>	
ATE US (dust, mist)	1.5 mg/l/4h
<b>N-NONANE UNLABELED (111-84-2)</b>	
LC50 Inhalation - Rat	23760 mg/m <sup>3</sup> male - 4 h
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	11 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h
Skin corrosion/irritation, Dermal, rat	Result: Skin Irritation (Draize Test)
Additional information	: S. Typhimurium Result: negative
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
<b>2,3',4',5-TETRACB (PCB-70) (13C12, 99%) (208263-81-4)</b>	
IARC group	2A - Probably carcinogenic to humans
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen
<b>3,3',4,5,5'-PENTACB (PCB-127) (13C12, 99%) (39635-33-1 (Unlabeled))</b>	
IARC group	2A - Probably carcinogenic to humans
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen
Reproductive toxicity	: Not classified
STOT-single exposure	: May cause drowsiness or dizziness.
<b>N-NONANE UNLABELED (111-84-2)</b>	
STOT-single exposure	May cause drowsiness or dizziness.
STOT-repeated exposure	: Not classified
<b>2,4',6-TRICB (PCB-32) (13C12, 99%) (38444-77-8 (Unlabeled))</b>	
STOT-repeated exposure	May cause damage to organs (liver) through prolonged or repeated exposure (Dermal, Inhalation, oral).
<b>2,3',4',5-TETRACB (PCB-70) (13C12, 99%) (208263-81-4)</b>	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure (Dermal, Inhalation, oral).
<b>2,2',3,3',4,4',5-HEPTACB (PCB-170) (13C12, 99%) (35065-30-6 (Unlabeled))</b>	
STOT-repeated exposure	May cause damage to organs (liver, Skin) through prolonged or repeated exposure (Dermal, Inhalation, oral).
<b>2,2',3,3',4,4'-HEXACB (PCB-128) (13C12, 99%) (38380-07-3 (Unlabeled))</b>	
STOT-repeated exposure	May cause damage to organs (Skin, liver) through prolonged or repeated exposure (Dermal, Inhalation, oral).
<b>3,3',4,5,5'-PENTACB (PCB-127) (13C12, 99%) (39635-33-1 (Unlabeled))</b>	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure (Dermal, Inhalation, oral).



# MONO-DECA + PREDOMINANT PCB SYRINGE SPIKE (13C12, 99%) IN NONANE

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Aspiration hazard : May be fatal if swallowed and enters airways.  
Viscosity, kinematic :  $\leq 1.008 \text{ mm}^2/\text{s}$  at 20 °C (68 °F)

N-NONANE UNLABELED (111-84-2)	
Viscosity, kinematic	$\leq 1.008 \text{ mm}^2/\text{s}$ at 20 °C (68 °F)
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. Harmful if inhaled.
Symptoms/effects after inhalation	: Danger of serious damage to health by prolonged exposure through inhalation. Harmful if inhaled. May cause drowsiness or dizziness.
Symptoms/effects after skin contact	: Causes skin irritation.
Symptoms/effects after eye contact	: Causes serious eye irritation.
Symptoms/effects after ingestion	: May be fatal if swallowed and enters airways.

## 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.

2,2',3,3',4,4',5-HEPTACB (PCB-170) (13C12, 99%) (35065-30-6 (Unlabeled))	
LC50 - Fish [1]	0.034 mg/l Pimephales promelas (fathead minnow) - 96 h

### 12.2. Persistence and degradability

MONO-DECA + PREDOMINANT PCB SYRINGE SPIKE (13C12, 99%) IN NONANE	
Persistence and degradability	Not established.

### 12.3. Bioaccumulative potential

MONO-DECA + PREDOMINANT PCB SYRINGE SPIKE (13C12, 99%) IN NONANE	
Partition coefficient n-octanol/water (Log Pow)	5.65
Bioaccumulative potential	Not established.

2,2',3,3',4,4',5-HEPTACB (PCB-170) (13C12, 99%) (35065-30-6 (Unlabeled))	
Partition coefficient n-octanol/water (Log Pow)	8.27

N-NONANE UNLABELED (111-84-2)	
Partition coefficient n-octanol/water (Log Pow)	5.65
Bioaccumulative potential	Indication of bioaccumulation.

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Other adverse effects : Disposal must be done according to official regulations. Avoid release to the environment.  
Other information : Avoid release to the environment.

# MONO-DECA + PREDOMINANT PCB SYRINGE SPIKE (13C12, 99%) IN NONANE

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### SECTION 13: Disposal considerations

#### 13.1. Disposal 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 DOT / TDG / IMDG / IATA

#### 14.1. UN number

DOT NA No	: UN1920
UN-No. (TDG)	: UN1920
UN-No. (IMDG)	: 1920
UN-No. (IATA)	: 1920

#### 14.2. UN proper shipping name

Proper Shipping Name (DOT)	: Nonanes
Proper Shipping Name (TDG)	: NONANES
Proper Shipping Name (IMDG)	: NONANES
Proper Shipping Name (IATA)	: Nonanes

#### 14.3. Transport hazard class(es)

##### DOT

Transport hazard class(es) (DOT)	: 3
Hazard labels (DOT)	: 3



##### TDG

Transport hazard class(es) (TDG)	: 3
Hazard labels (TDG)	: 3



##### IMDG

Transport hazard class(es) (IMDG)	: 3
Hazard labels (IMDG)	: 3



# MONO-DECA + PREDOMINANT PCB SYRINGE SPIKE (13C12, 99%) IN NONANE

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### IATA

Transport hazard class(es) (IATA) : 3  
Hazard labels (IATA) : 3



### 14.4. Packing group

Packing group (DOT) : III  
Packing group (TDG) : III  
Packing group (IMDG) : III  
Packing group (IATA) : III

### 14.5. Environmental hazards

Marine pollutant : Yes (IMDG only)



Other information : No supplementary information available.

### 14.6. Special precautions for user

**DOT**  
UN-No.(DOT) : UN1920  
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)  
TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.  
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  
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 60 L  
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 220 L  
DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

# MONO-DECA + PREDOMINANT PCB SYRINGE SPIKE (13C12, 99%) IN NONANE

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### TDG

UN-No. (TDG) : UN1920  
Explosive Limit and Limited Quantity Index : 5 L  
Excepted quantities (TDG) : E1  
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index : 60 L  
Emergency Response Guide (ERG) Number : 128

### IMDG

Limited quantities (IMDG) : 5 L  
Excepted quantities (IMDG) : E1  
Packing instructions (IMDG) : P001, LP01  
IBC packing instructions (IMDG) : IBC03  
Tank instructions (IMDG) : T2  
Tank special provisions (IMDG) : TP1  
EmS-No. (Fire) : F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS  
EmS-No. (Spillage) : S-E - SPILLAGE SCHEDULE Echo - FLAMMABLE LIQUIDS, FLOATING ON WATER  
Stowage category (IMDG) : A  
Flash point (IMDG) : '  
Properties and observations (IMDG) : Colourless liquids. Explosive limits: 0.8% to 2.9% normal-NONANE: flashpoint 31°C c.c. Immiscible with water. Irritating to skin, eyes and mucous membranes.  
MFAG-No : 128

### IATA

PCA Excepted quantities (IATA) : E1  
PCA Limited quantities (IATA) : Y344  
PCA limited quantity max net quantity (IATA) : 10L  
PCA packing instructions (IATA) : 355  
PCA max net quantity (IATA) : 60L  
CAO packing instructions (IATA) : 366  
CAO max net quantity (IATA) : 220L  
ERG code (IATA) : 3L

### 14.7. 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

MONO-DECA + PREDOMINANT PCB SYRINGE SPIKE (13C12, 99%) IN NONANE	
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

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
2,4',6-TRICB (PCB-32) (13C12, 99%)	38444-77-8 (Unlabeled)	Not present	-	
2,3',4',5-TETRACB (PCB-70) (13C12, 99%)	208263-81-4	Not present	-	
2,2',3,3',4,4',5-HEPTACB (PCB-170) (13C12, 99%)	35065-30-6 (Unlabeled)	Not present	-	

# MONO-DECA + PREDOMINANT PCB SYRINGE SPIKE (13C12, 99%) IN NONANE

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Name	CAS-No.	Listing	Commercial status	Flags
N-NONANE UNLABELED	111-84-2	Present	Active	T
2,2',3,3',4,4'-HEXACB (PCB-128) (13C12, 99%)	38380-07-3 (Unlabeled)	Not present	-	
3,3',4,5,5'-PENTACB (PCB-127) (13C12, 99%)	39635-33-1 (Unlabeled)	Not present	-	

2,4',6-TRICB (PCB-32) (13C12, 99%) (38444-77-8 (Unlabeled))	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.

2,3',4',5-TETRACB (PCB-70) (13C12, 99%) (208263-81-4)	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302

2,2',3,3',4,4',5-HEPTACB (PCB-170) (13C12, 99%) (35065-30-6 (Unlabeled))	
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

N-NONANE UNLABELED (111-84-2)	
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

2,2',3,3',4,4'-HEXACB (PCB-128) (13C12, 99%) (38380-07-3 (Unlabeled))	
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

3,3',4,5,5'-PENTACB (PCB-127) (13C12, 99%) (39635-33-1 (Unlabeled))	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302

## 15.2. International regulations

### CANADA

MONO-DECA + PREDOMINANT PCB SYRINGE SPIKE (13C12, 99%) IN NONANE
Listed on the Canadian DSL (Domestic Substances List)

2,3',4',5-TETRACB (PCB-70) (13C12, 99%) (208263-81-4)
Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)

# MONO-DECA + PREDOMINANT PCB SYRINGE SPIKE (13C12, 99%) IN NONANE

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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

Listed on the Canadian DSL (Domestic Substances List)

### EU-Regulations

No additional information available

### National regulations

### MONO-DECA + PREDOMINANT PCB SYRINGE SPIKE (13C12, 99%) IN NONANE

CAUTION: This material is supplied for research and development purposes subject to the R&D exemption under TSCA, 40 CFR 720.36, and must meet the requirements of the exemption, including supervision by a "technically qualified individual" as defined by 40 CFR 720.3(ee). The use of this material for "commercial purposes" as defined by 40 CFR 720.3(r) is not permitted in the United States.

### 15.3. US State regulations

### MONO-DECA + PREDOMINANT PCB SYRINGE SPIKE (13C12, 99%) IN NONANE

State or local regulations	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
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### 2,4',6-TRICB (PCB-32) (13C12, 99%) (38444-77-8 (Unlabeled))

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)	Maximum allowable dose level (MADL)
Yes	Yes	Yes	Yes		

### 2,3',4',5-TETRACB (PCB-70) (13C12, 99%) (208263-81-4)

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)	Maximum allowable dose level (MADL)
Yes	Yes	Yes	No		

### 2,2',3,3',4,4',5-HEPTACB (PCB-170) (13C12, 99%) (35065-30-6 (Unlabeled))

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)	Maximum allowable dose level (MADL)
Yes	Yes	Yes	No		

### 2,2',3,3',4,4'-HEXACB (PCB-128) (13C12, 99%) (38380-07-3 (Unlabeled))

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)	Maximum allowable dose level (MADL)
Yes	Yes	Yes	Yes		

# MONO-DECA + PREDOMINANT PCB SYRINGE SPIKE (13C12, 99%) IN NONANE

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

3,3',4,5,5'-PENTACB (PCB-127) (13C12, 99%) (39635-33-1 (Unlabeled))					
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)	Maximum allowable dose level (MADL)
Yes	Yes	Yes	Yes		

Component	State or local regulations
N-NONANE UNLABELED(111-84-2)	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

### SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date : 07/06/2023

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

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 H-phrases	
H226	Flammable liquid and vapor
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H319	Causes serious eye irritation
H332	Harmful if inhaled
H336	May cause drowsiness or dizziness
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

Safety Data Sheet (SDS), USA

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.