



EPA METHOD 1668A/B/C ALT INJECTION INTERNAL STANDARD SOLUTION 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: 08/08/2017

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:

Version: 1.0

EC-5595

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

1.1. Product identifier

Product form : Mixtures
Product name : EPA METHOD 1668A/B/C ALT INJECTION INTERNAL STANDARD SOLUTION 1000 NG/ML IN NONANE
Product code : EC-5595

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
Acute Tox. 4 (Inhalation:vapour) H332
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]

Xn; R20
Xn; R65
Xi; R36/37/38
R10

Full text of R-phrases: see section 16

GHS-US classification

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

Full text of H statements : see section 16

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Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

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

Hazard pictograms (CLP)



Signal word (CLP)

: Danger

Hazardous ingredients

: 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
H332 - Harmful if inhaled
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, spray, vapours
P264 - Wash hands, forearms and face thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear protective clothing, protective gloves

GHS-US labelling

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
H332 - Harmful if inhaled
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, vapours
P264 - Wash Both hands 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 Hazard pictograms (CLP) on this label)
P331 - Do NOT induce vomiting

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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, 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

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	99.9988	R10 Xn; R20 Xn; R65 Xi; R36/37/38
2,5-DICB (PCB-9) (13C12, 98-99%)	(CAS No) 250694-89-4 (EC Index No) 602-039-00-4	0.00014	Xn; R48/20/21/22 N; R50/53 R33
2,4,6-TRICB (PCB-32) (13C12, 99%)	(CAS No) 38444-77-8 (Unlabeled) (EC Index No) 602-039-00-4	0.00014	Xn; R48/20/21/22 N; R50/53 R33
2,2',4,5,5'-PENTACB (PCB-101) (13C12, 99%)	(CAS No) 104130-39-4 (EC Index No) 602-039-00-4	0.00014	Xn; R48/20/21/22 N; R50/53 R33
2,2',3,4,4',5'-HEXACB (PCB-138) (13C12, 99%)	(CAS No) 208263-66-5 (EC Index No) 602-039-00-4	0.00014	Xn; R48/20/21/22 N; R50/53 R33
2,2',3,3',4,4',5,5'-OCTACB (PCB-194) (13C12, 98%)	(CAS No) 208263-74-5 (EC Index No) 602-039-00-4	0.00014	Xn; R48/20/21/22 N; R50/53 R33
2,4,5-TRICB (PCB-31) (13C12, 99%)	(CAS No) 16606-02-3 (Unlabeled) (EC Index No) 602-039-00-4	0.00014	N; R50/53 R33 Xn; R20/21/22 Xn; R65
2,2',5,5'-TETRACB (PCB-52) (13C12, 99%)	(CAS No) 208263-80-3 (EC Index No) 602-039-00-4	0.00014	Carc.Cat.1; R45 N; R51/53 Xn; R48/20/21/22
3,3',4,5,5'-PENTACB (PCB-127) (13C12, 99%)	(CAS No) 39635-33-1 (Unlabeled) (EC Index No) 602-039-00-4	0.00014	N; R50/53 R33 R48
2,2',3,4,4',5,5'-HEPTACB (PCB-180) (13C12, 99%)	(CAS No) 35065-29-3 (Unlabeled)	0.00014	R33

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	99.9988	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
2,5-DICB (PCB-9) (13C12, 98-99%)	(CAS No) 250694-89-4 (EC Index No) 602-039-00-4	0.00014	Carc. 1B, H350 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

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2,4',6-TRICB (PCB-32) (13C12, 99%)	(CAS No) 38444-77-8 (Unlabeled) (EC Index No) 602-039-00-4	0.00014	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
2,2',4,5,5'-PENTACB (PCB-101) (13C12, 99%)	(CAS No) 104130-39-4 (EC Index No) 602-039-00-4	0.00014	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
2,2',3,4,4',5'-HEXACB (PCB-138) (13C12, 99%)	(CAS No) 208263-66-5 (EC Index No) 602-039-00-4	0.00014	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
2,2',3,3',4,4',5,5'-OCTACB (PCB-194) (13C12, 98%)	(CAS No) 208263-74-5 (EC Index No) 602-039-00-4	0.00014	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
2,4',5-TRICB (PCB-31) (13C12, 99%)	(CAS No) 16606-02-3 (Unlabeled) (EC Index No) 602-039-00-4	0.00014	STOT RE 2, H373 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410
2,2',5,5'-TETRACB (PCB-52) (13C12, 99%)	(CAS No) 208263-80-3 (EC Index No) 602-039-00-4	0.00014	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) (EC Index No) 602-039-00-4	0.00014	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
2,2',3,4,4',5,5'-HEPTACB (PCB-180) (13C12, 99%)	(CAS No) 35065-29-3 (Unlabeled)	0.00014	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Name	Product identifier	%	GHS-US classification
N-NONANE UNLABELED	(CAS No) 111-84-2	99.9988	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
2,5-DICB (PCB-9) (13C12, 98-99%)	(CAS No) 250694-89-4	0.00014	Carc. 1B, H350 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
2,4',6-TRICB (PCB-32) (13C12, 99%)	(CAS No) 38444-77-8 (Unlabeled)	0.00014	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
2,2',4,5,5'-PENTACB (PCB-101) (13C12, 99%)	(CAS No) 104130-39-4	0.00014	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
2,2',3,4,4',5'-HEXACB (PCB-138) (13C12, 99%)	(CAS No) 208263-66-5	0.00014	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
2,2',3,3',4,4',5,5'-OCTACB (PCB-194) (13C12, 98%)	(CAS No) 208263-74-5	0.00014	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
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2,2',5,5'-TETRACB (PCB-52) (13C12, 99%)	(CAS No) 208263-80-3	0.00014	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)	0.00014	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
2,2',3,4,4',5,5'-HEPTACB (PCB-180) (13C12, 99%)	(CAS No) 35065-29-3 (Unlabeled)	0.00014	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

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

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: If you feel unwell, seek medical advice. Evacuate danger area.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.

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First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

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

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

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

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

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

5.2. Special hazards arising from the substance or mixture

Reactivity : Flammable liquid and vapour. Vapours 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, vapours. 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

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.
Hygiene measures : 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.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

N-NONANE UNLABELED		
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	200.00000000 ppm USA. ACGIH Threshold Limit Values (TLV)

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N-NONANE UNLABELED		
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.
2,2',5,5'-TETRACB (PCB-52) (13C12, 99%) (208263-80-3)		
USA OSHA	OSHA PEL (TWA) (mg/m ³)	0.5 mg/m ³

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.
 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
 Colour : Colourless.
 Odour : No data available
 Odour threshold : No data available
 pH : No data available
 Relative evaporation rate (butylacetate=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
 Vapour pressure : 5.69 hPa (4.27 mmHg) at 25 °C (77 °F)
 Relative vapour density at 20 °C : No data available
 Relative density : No data available
 Density : 0.718 g/ml at 25 °C (77 °F)

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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
Oxidising properties	: No data available
Explosive limits	: 0.87 - 2.9 % (V)

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable liquid and vapour. Vapours 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 : Inhalation:vapour: Harmful if inhaled.

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ATE CLP (vapours)	11.000 mg/l/4h
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N-NONANE UNLABELED

LC50 inhalation rat (mg/l)	23760 mg/m ³ male - 4 h
ATE CLP (gases)	3200.000 ppmv/4h
ATE CLP (vapours)	11.000 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

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: May cause drowsiness or dizziness.
STOT-repeated exposure	: Not classified

N-NONANE UNLABELED

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/injuries after inhalation	: Harmful if inhaled. May cause respiratory irritation.
Symptoms/injuries after skin contact	: Causes skin irritation. May be harmful in contact with skin.

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Symptoms/injuries after eye contact : Causes serious eye irritation.
Symptoms/injuries after ingestion : May be fatal if swallowed and enters airways. Risk of lung oedema.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

N-NONANE UNLABELED	
EC50 Daphnia 1	0.2 mg/l static test EC50 - Daphnia magna (Water flea) - 48 h
2,4',5-TRICB (PCB-31) (13C12, 99%) (16606-02-3 (Unlabeled))	
ErC50 (algae)	0.06 mg/l Growth inhibition Pseudokirchneriella subcapitata - 48 h
2,2',5,5'-TETRACB (PCB-52) (13C12, 99%) (208263-80-3)	
LC50 fish 1	>= 0.002 mg/l Pimephales promelas (fathead minnow) - 96 h
EC50 Daphnia 1	>= 0.002 mg/l Daphnia magna (Water flea) - 48 h
NOEC (chronic)	0.1 mg/l Oncorhynchus mykiss (rainbow trout) - 7 d

12.2. Persistence and degradability

2,4',6-TRICB (PCB-32) (13C12, 99%) (38444-77-8 (Unlabeled))	
Persistence and degradability	Not available.
2,4',5-TRICB (PCB-31) (13C12, 99%) (16606-02-3 (Unlabeled))	
Persistence and degradability	Not available.

12.3. Bioaccumulative potential

EPA METHOD 1668A/B/C ALT INJECTION INTERNAL STANDARD SOLUTION 1000 NG/ML IN NONANE	
Log Pow	5.65
N-NONANE UNLABELED	
Log Pow	5.65
Bioaccumulative potential	Indication of bioaccumulation.
2,4',6-TRICB (PCB-32) (13C12, 99%) (38444-77-8 (Unlabeled))	
Bioaccumulative potential	Not available.
2,4',5-TRICB (PCB-31) (13C12, 99%) (16606-02-3 (Unlabeled))	
Log Pow	5.1

12.4. Mobility in soil

2,4',6-TRICB (PCB-32) (13C12, 99%) (38444-77-8 (Unlabeled))	
Ecology - soil	Not available.
2,4',5-TRICB (PCB-31) (13C12, 99%) (16606-02-3 (Unlabeled))	
Ecology - soil	Not available.

12.5. Results of PBT and vPvB assessment

No additional information available

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

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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



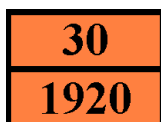
Packing group (DOT) : III - Minor Danger
DOT Special Provisions (49 CFR 172.102) : B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then the bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has a flash point of less than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

14.3. Additional information

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

Overland transport

Hazard identification number (Kemler No.) : 30
Orange plates :



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

Transport by sea

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

Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 60 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 220 L
Civil Aeronautics Law : Flammable liquids

14.4. Environmental hazards

Other information : No supplementary information available.

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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

EPA METHOD 1668A/B/C ALT INJECTION INTERNAL STANDARD SOLUTION 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.
---------------------------------------	--

N-NONANE UNLABELED

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.
---------------------------------------	--

2,5-DICB (PCB-9) (13C12, 98-99%) (250694-89-4)

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.
---------------------------------------	--

2,2',4,5'-PENTACB (PCB-101) (13C12, 99%) (104130-39-4)

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.
---------------------------------------	--

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.
--	--

SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313.
---------------------------------------	--

2,2',3,4,4',5'-HEXACB (PCB-138) (13C12, 99%) (208263-66-5)

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.
---------------------------------------	--

2,2',3,3',4,4',5,5'-OCTACB (PCB-194) (13C12, 98%) (208263-74-5)

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	Delayed (chronic) health hazard
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SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313.
---------------------------------------	--

2,4',5-TRICB (PCB-31) (13C12, 99%) (16606-02-3 (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
-------------------------------------	---------------------------------

SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313.
---------------------------------------	--

2,2',5,5'-TETRACB (PCB-52) (13C12, 99%) (208263-80-3)

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.
---------------------------------------	--

2,2',3,4,4',5,5'-HEPTACB (PCB-180) (13C12, 99%) (35065-29-3 (Unlabeled))

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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15.2. International regulations

CANADA

EPA METHOD 1668A/B/C ALT INJECTION INTERNAL STANDARD SOLUTION 1000 NG/ML IN NONANE

Listed on the Canadian DSL (Domestic Substances List)

N-NONANE UNLABELED

Listed on the Canadian DSL (Domestic Substances List)

15.2.1. National regulations

N-NONANE UNLABELED

15.3. US State regulations

EPA METHOD 1668A/B/C ALT INJECTION INTERNAL STANDARD SOLUTION 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
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

N-NONANE 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)
No	No	No	No	

2,5-DICB (PCB-9) (13C12, 98-99%) (250694-89-4)

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)
Yes	Yes	Yes	Yes	

2,2',4,5,5'-PENTACB (PCB-101) (13C12, 99%) (104130-39-4)

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)
Yes	Yes	Yes	Yes	

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)
Yes	Yes	Yes	Yes	

2,2',3,4,4',5'-HEXACB (PCB-138) (13C12, 99%) (208263-66-5)

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)
Yes	Yes	Yes	Yes	

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2,2',3,3',4,4',5,5'-OCTACB (PCB-194) (13C12, 98%) (208263-74-5)				
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)
Yes	Yes	Yes	Yes	
2,4',5-TRICB (PCB-31) (13C12, 99%) (16606-02-3 (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)
Yes	Yes	Yes	Yes	
2,2',5,5'-TETRACB (PCB-52) (13C12, 99%) (208263-80-3)				
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)
Yes	Yes	Yes	Yes	
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)
Yes	Yes	Yes	Yes	
2,2',3,4,4',5,5'-HEPTACB (PCB-180) (13C12, 99%) (35065-29-3 (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)
Yes	Yes	Yes	Yes	
N-NONANE UNLABELED				
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				
2,5-DICB (PCB-9) (13C12, 98-99%) (250694-89-4)				
State or local regulations				
U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List				
2,2',4,5,5'-PENTACB (PCB-101) (13C12, 99%) (104130-39-4)				
State or local regulations				
U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List				
2,4',6-TRICB (PCB-32) (13C12, 99%) (38444-77-8 (Unlabeled))				
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',5'-HEXACB (PCB-138) (13C12, 99%) (208263-66-5)				
State or local regulations				
U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List				

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2,2',3,3',4,4',5,5'-OCTACB (PCB-194) (13C12, 98%) (208263-74-5)
State or local regulations
U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List
2,4',5-TRICB (PCB-31) (13C12, 99%) (16606-02-3 (Unlabeled))
State or local regulations
U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List
2,2',5,5'-TETRACB (PCB-52) (13C12, 99%) (208263-80-3)
State or local regulations
U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List
3,3',4,5,5'-PENTACB (PCB-127) (13C12, 99%) (39635-33-1 (Unlabeled))
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',5,5'-HEPTACB (PCB-180) (13C12, 99%) (35065-29-3 (Unlabeled))
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-statements:

Acute Tox. 4 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) 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
Asp. Tox. 1	Aspiration hazard, Category 1
Carc. 1B	Carcinogenicity, Category 1B
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
H226	Flammable liquid and vapour
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
H350	May cause 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
R10	Flammable
R20	Harmful by inhalation
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed
R33	Danger of cumulative effects
R36/37/38	Irritating to eyes, respiratory system and skin
R45	May cause cancer
R48	Danger of serious damage to health by prolonged exposure
R48/20/21/22	Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed

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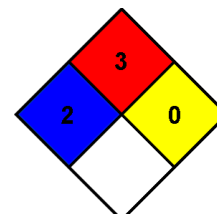
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R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R65	Harmful: may cause lung damage if swallowed
N	Dangerous for the environment
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.
- NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



HMIS III 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