



FULLY RESOLVED NATIVE MONO-DECA PCB MIXTURE UNLABELED

Safety Data Sheet

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

Date of issue: 17/12/2015

Revision date:

Version: 1.0

EC-5434

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

1.1. Product identifier

Product form : Mixtures
Product name : FULLY RESOLVED NATIVE MONO-DECA PCB MIXTURE UNLABELED
Product code : EC-5434

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.
Industrial.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

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

USA: 1-800-322-1174 Int: 1-978-749-8000
cilsales@isotope.com 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. 2 H225
Skin Irrit. 2 H315
STOT SE 3 H336
Asp. Tox. 1 H304
Aquatic Acute 1 H400
Aquatic Chronic 1 H410

Full text of H-phrases: see section 16

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

F; R11
Xi; R38
N; R50/53
R67

Full text of R-phrases: see section 16

Classification (GHS-US)

Flam. Liq. 2 H225
Skin Irrit. 2 H315
STOT SE 3 H336
Asp. Tox. 1 H304
Aquatic Acute 1 H400
Aquatic Chronic 1 H410

Adverse physicochemical, human health and environmental effects

Liver, Kidney.

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2.2. Label elements

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

Hazard pictograms (CLP) :



Signal word (CLP) :

Danger

Hazard statements (CLP) :

H225 - Highly flammable liquid and vapor
H304 - May be fatal if swallowed and enters airways
H315 - Causes skin irritation
H336 - May cause drowsiness or dizziness
H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (CLP) :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P233 - Keep container tightly closed
P240 - Ground/bond container and receiving equipment
P241 - Use explosion-proof electrical, lighting, ventilating equipment
P261 - Avoid breathing dust, fume, gas, mist, spray, vapors
P264 - Wash Both hands thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
P273 - Avoid release to the environment

GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H225 - Highly flammable liquid and vapor
H304 - May be fatal if swallowed and enters airways
H315 - Causes skin irritation
H336 - May cause drowsiness or dizziness
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects

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 dust, fume, gas, mist, spray, vapors
P264 - Wash Both hands thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
P273 - Avoid release to the environment
P280 - Wear protective clothing, protective gloves
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
P302+P352 - IF ON SKIN: Wash with plenty of soap and water
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P312 - Call a POISON CENTER/doctor/physician if you feel unwell
P321 - Specific treatment (see Hazard pictograms (CLP) on this label)
P331 - If swallowed, do NOT induce vomiting
P332+P313 - If skin irritation occurs: 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 for extinction
P391 - Collect spillage
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

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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 |
|-------------------------------------|--|----------|--|
| ISOOCTANE UNLABELED | (CAS No) 540-84-1 (EC no) 208-759-1 (EC index no) 601-009-00-8 | 99.99263 | Xi; R38 N; R50/53 R67 F; R11 |
| 2-MONOCB UNLABELED | (CAS No) 2051-60-7 (EC no) 218-125-6 | 0.00029 | Xn; R48/20 |
| 4-MONOCB UNLABELED | (CAS No) 2051-62-9 (EC no) 218-127-7 | 0.00029 | Xn; R48/20 |
| 2,6-DICB UNLABELED | (CAS No) 33146-45-1 | 0.00029 | N; R50/53 Xn; R48/20 |
| 4,4'-DICB UNLABELED | (CAS No) 2050-68-2 (EC no) 218-095-4 | 0.00029 | N; R50/53 |
| 3,4-DICB UNLABELED | (CAS No) 2974-92-7 (EC no) 215-648-1 | 0.00029 | N; R50/53 R33 R48 |
| 2,4'-DICB UNLABELED | (CAS No) 34883-43-7 (EC index no) 602-039-00-4 | 0.00029 | Xn; R48/20/21/22 N; R50/53 R33 |
| 2,5-DICB UNLABELED | (CAS No) 34883-39-1 | 0.00029 | Xn; R48/20/21/22 N; R50/53 R33 |
| 3,3',4,4',5,5'-HEXACB UNLABELED | (CAS No) 32774-16-6 (EC index no) 602-039-00-4 | 0.00014 | N; R50/53 Xn; R22 |
| 3,3',4,4',5-PENTACB UNLABELED | (CAS No) 57465-28-8 (EC index no) 602-039-00-4 | 0.00014 | R33 |
| 3,3',4,4'-TETRACB UNLABELED | (CAS No) 32598-13-3 (EC index no) 602-039-00-4 | 0.00014 | R33 N; R50/53 |
| 3,4,4',5-TETRACB UNLABELED | (CAS No) 70362-50-4 (EC index no) 602-039-00-4 | 0.00014 | N; R50/53 R33 |
| DECACB UNLABELED | (CAS No) 2051-24-3 | 0.00014 | N; R50/53 |
| 3,4,4'-TRICB UNLABELED | (CAS No) 38444-90-5 | 0.00014 | Xn; R22 Xi; R41 N; R50/53 |
| 2,2',6,6'-TETRACB UNLABELED | (CAS No) 15968-05-5 | 0.00014 | T+; R28 N; R50/53 |
| 2,2',3,3',4,4',5,6-OCTACB UNLABELED | (CAS No) 52663-78-2 | 0.00014 | N; R50/53 Carc.Cat.1; R45 |
| 2,2',5,5'-TETRACB UNLABELED | (CAS No) 35693-99-3 (EC index no) 602-039-00-4 | 0.00014 | Xn; R22 N; R50/53 |
| 2,3,3',4,4',5,5'-HEPTACB UNLABELED | (CAS No) 39635-31-9 (EC index no) 602-039-00-4 | 0.00014 | R33 |
| 2,3,3',4,4',5-HEXACB UNLABELED | (CAS No) 38380-08-4 (EC index no) 602-039-00-4 | 0.00014 | R33 |
| 2',3,4,4',5-PENTACB UNLABELED | (CAS No) 65510-44-3 (EC index no) 602-039-00-4 | 0.00014 | R33 |
| 2,3',4,4',5,5'-HEXACB UNLABELED | (CAS No) 52663-72-6 (EC index no) 602-039-00-4 | 0.00014 | R33 |
| 2,3,3',4,4',5'-HEXACB UNLABELED | (CAS No) 69782-90-7 (EC index no) 602-039-00-4 | 0.00014 | R33 |

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|--|--|---------|--|
| 2,3,4,4',5-PENTACB UNLABELED | (CAS No) 74472-37-0 (EC index no) 602-039-00-4 | 0.00014 | Xn; R22 N; R50/53 |
| 2,3',4,4',5-PENTACB UNLABELED | (CAS No) 31508-00-6 (EC no) 215-648-1 (EC index no) 602-039-00-4 | 0.00014 | Xn; R22 |
| 2,2',4,6,6'-PENTACB UNLABELED | (CAS No) 56558-16-8 | 0.00014 | N; R50/53 |
| 2,2',4,4',6,6'-HEXACB UNLABELED | (CAS No) 33979-03-2 | 0.00014 | Not classified |
| 2,2',3,4',5,6,6'-HEPTACB UNLABELED | (CAS No) 74487-85-7 | 0.00014 | Xn; R20 Xn; R48/20 N; R50/53 |
| 2,2',3,3',4,4',5,5'-OCTACB UNLABELED | (CAS No) 35694-08-7 | 0.00014 | Xn; R48/20 N; R50/53 |
| 2,2',3,3',4,4',5,5',6-NONACB UNLABELED | (CAS No) 40186-72-9 | 0.00014 | R33 |
| 2,2',5-TRICB UNLABELED | (CAS No) 37680-65-2 (EC index no) 602-039-00-4 | 0.00014 | R33 |
| 2',3,4-TRICB UNLABELED | (CAS No) 38444-86-9 (EC no) 215-648-1 | 0.00014 | R33 |
| 2,2',3,5'-TETRACB UNLABELED | (CAS No) 41464-39-5 | 0.00014 | R33 |
| 2,4,4',5-TETRACB UNLABELED | (CAS No) 32690-93-0 | 0.00014 | R33 |
| 2,2',4,4',5-PENTACB UNLABELED | (CAS No) 38380-01-7 | 0.00014 | R33 |
| 2,2',4,4',5,5'-HEXACB UNLABELED | (CAS No) 35065-27-1 (EC no) 215-648-1 | 0.00014 | R33 |
| 2,3,3',4,4',5,5',6-OCTACB UNLABELED | (CAS No) 74472-53-0 | 0.00014 | R33 |
| 2,2',3,3',4,5,5',6,6'-NONACB UNLABELED | (CAS No) 52663-77-1 (EC index no) 602-039-00-4 | 0.00014 | R33 |
| 2,2',6-TRICB UNLABELED | (CAS No) 38444-73-4 | 0.00014 | Xn; R48/20/21/22 Xi; R41 N; R50/53 R33 |
| 2,2',3,3',5,5',6,6'-OCTACB UNLABELED | (CAS No) 2136-99-4 | 0.00014 | Xn; R48/20/21/22 N; R50/53 R33 |
| 3,3',4-TRICB UNLABELED | (CAS No) 37680-69-6 | 0.00014 | Xn; R48/20/21/22 N; R50/53 R33 |
| 3,4,5-TRICB UNLABELED | (CAS No) 53555-66-1 (EC index no) 602-039-00-4 | 0.00014 | Xn; R48/20/21/22 N; R50/53 R33 |
| 2,3,3',5-TETRACB UNLABELED | (CAS No) 70424-67-8 | 0.00014 | Xn; R48/20/21/22 N; R50/53 R33 |
| 3,3',4,5-TETRACB UNLABELED | (CAS No) 70362-49-1 | 0.00014 | Xn; R48/20/21/22 N; R50/53 R33 |
| 3,3',4,5'-TETRACB UNLABELED | (CAS No) 41464-48-6 (EC index no) 602-039-00-4 | 0.00014 | Xn; R48/20/21/22 N; R50/53 R33 |
| 2,3,3',4',5,5'-HEXACB UNLABELED | (CAS No) 39635-34-2 | 0.00014 | N; R50/53 R33 R48 |

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|-------------------------------------|--|----------|---|
| ISOCTANE UNLABELED | (CAS No) 540-84-1 (EC no) 208-759-1 (EC index no) 601-009-00-8 | 99.99263 | Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 2-MONOCB UNLABELED | (CAS No) 2051-60-7 (EC no) 218-125-6 | 0.00029 | STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 4-MONOCB UNLABELED | (CAS No) 2051-62-9 (EC no) 218-127-7 | 0.00029 | STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 2,6-DICB UNLABELED | (CAS No) 33146-45-1 | 0.00029 | STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 4,4'-DICB UNLABELED | (CAS No) 2050-68-2 (EC no) 218-095-4 | 0.00029 | STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 3,4-DICB UNLABELED | (CAS No) 2974-92-7 (EC no) 215-648-1 | 0.00029 | STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 2,4'-DICB UNLABELED | (CAS No) 34883-43-7 (EC index no) 602-039-00-4 | 0.00029 | STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 2,5-DICB UNLABELED | (CAS No) 34883-39-1 | 0.00029 | STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 3,3',4,4',5,5'-HEXACB UNLABELED | (CAS No) 32774-16-6 (EC index no) 602-039-00-4 | 0.00014 | STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 3,3',4,4',5-PENTACB UNLABELED | (CAS No) 57465-28-8 (EC index no) 602-039-00-4 | 0.00014 | STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 3,3',4,4'-TETRACB UNLABELED | (CAS No) 32598-13-3 (EC index no) 602-039-00-4 | 0.00014 | STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 3,4,4',5-TETRACB UNLABELED | (CAS No) 70362-50-4 (EC index no) 602-039-00-4 | 0.00014 | STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| DECACB UNLABELED | (CAS No) 2051-24-3 | 0.00014 | Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 3,4,4'-TRICB UNLABELED | (CAS No) 38444-90-5 | 0.00014 | Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 |
| 2,2',6,6'-TETRACB UNLABELED | (CAS No) 15968-05-5 | 0.00014 | Carc. 1B, H350i STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 2,2',3,3',4,4',5,6-OCTACB UNLABELED | (CAS No) 52663-78-2 | 0.00014 | STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 2,2',5,5'-TETRACB UNLABELED | (CAS No) 35693-99-3 (EC index no) 602-039-00-4 | 0.00014 | STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 2,3,3',4,4',5,5'-HEPTACB UNLABELED | (CAS No) 39635-31-9 (EC index no) 602-039-00-4 | 0.00014 | STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 2,3,3',4,4',5-HEXACB UNLABELED | (CAS No) 38380-08-4 (EC index no) 602-039-00-4 | 0.00014 | STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 2',3,4,4',5-PENTACB UNLABELED | (CAS No) 65510-44-3 (EC index no) 602-039-00-4 | 0.00014 | STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 2,3',4,4',5,5'-HEXACB UNLABELED | (CAS No) 52663-72-6 (EC index no) 602-039-00-4 | 0.00014 | STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 2,3,3',4,4',5'-HEXACB UNLABELED | (CAS No) 69782-90-7 (EC index no) 602-039-00-4 | 0.00014 | STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 2,3,4,4',5-PENTACB UNLABELED | (CAS No) 74472-37-0 (EC index no) 602-039-00-4 | 0.00014 | STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |

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|--|--|---------|---|
| 2,3',4,4',5-PENTACB UNLABELED | (CAS No) 31508-00-6 (EC no) 215-648-1 (EC index no) 602-039-00-4 | 0.00014 | STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 2,2',4,6,6'-PENTACB UNLABELED | (CAS No) 56558-16-8 | 0.00014 | STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 2,2',4,4',6,6'-HEXACB UNLABELED | (CAS No) 33979-03-2 | 0.00014 | Carc. 1B, H350i STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 2,2',3,4',5,6,6'-HEPTACB UNLABELED | (CAS No) 74487-85-7 | 0.00014 | Carc. 1B, H350 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 2,2',3,3',4,4',5,5'-OCTACB UNLABELED | (CAS No) 35694-08-7 | 0.00014 | STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 2,2',3,3',4,4',5,5',6-NONACB UNLABELED | (CAS No) 40186-72-9 | 0.00014 | Carc. 1B, H350 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 2,2',5-TRICB UNLABELED | (CAS No) 37680-65-2 (EC index no) 602-039-00-4 | 0.00014 | STOT RE 2, H373 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 |
| 2',3,4-TRICB UNLABELED | (CAS No) 38444-86-9 (EC no) 215-648-1 | 0.00014 | STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 2,2',3,5'-TETRACB UNLABELED | (CAS No) 41464-39-5 | 0.00014 | STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 2,4,4',5-TETRACB UNLABELED | (CAS No) 32690-93-0 | 0.00014 | STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 2,2',4,4',5-PENTACB UNLABELED | (CAS No) 38380-01-7 | 0.00014 | STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 2,2',4,4',5,5'-HEXACB UNLABELED | (CAS No) 35065-27-1 (EC no) 215-648-1 | 0.00014 | STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 2,3,3',4,4',5,5',6-OCTACB UNLABELED | (CAS No) 74472-53-0 | 0.00014 | Carc. 1B, H350 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 2,2',3,3',4,5,5',6,6'-NONACB UNLABELED | (CAS No) 52663-77-1 (EC index no) 602-039-00-4 | 0.00014 | Carc. 1B, H350 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 2,2',6-TRICB UNLABELED | (CAS No) 38444-73-4 | 0.00014 | Eye Dam. 1, H318 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 2,2',3,3',5,5',6,6'-OCTACB UNLABELED | (CAS No) 2136-99-4 | 0.00014 | STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 3,3',4-TRICB UNLABELED | (CAS No) 37680-69-6 | 0.00014 | STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 3,4,5-TRICB UNLABELED | (CAS No) 53555-66-1 (EC index no) 602-039-00-4 | 0.00014 | STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 2,3,3',5-TETRACB UNLABELED | (CAS No) 70424-67-8 | 0.00014 | STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 3,3',4,5-TETRACB UNLABELED | (CAS No) 70362-49-1 | 0.00014 | STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 3,3',4,5'-TETRACB UNLABELED | (CAS No) 41464-48-6 (EC index no) 602-039-00-4 | 0.00014 | STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 2,3,3',4',5,5'-HEXACB UNLABELED | (CAS No) 39635-34-2 | 0.00014 | STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |

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|---------------------|--------------------|----------|---|
| ISOOCTANE UNLABELED | (CAS No) 540-84-1 | 99.99263 | Flam. Liq. 1, H224 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |

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

SECTION 4: First aid measures

4.1. Description of first aid measures

| | |
|---------------------------------------|---|
| First-aid measures general | : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). |
| First-aid measures after inhalation | : Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER/doctor/physician if you feel unwell. |
| First-aid measures after skin contact | : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. 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. Obtain emergency medical attention. |

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

| | |
|--------------------------------------|---|
| Symptoms/injuries after inhalation | : Danger of serious damage to health by prolonged exposure through inhalation. Harmful if inhaled. May cause drowsiness or dizziness. |
| Symptoms/injuries after skin contact | : Causes skin irritation. |
| Symptoms/injuries after eye contact | : Causes serious eye irritation. |

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

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

5.2. Special hazards arising from the substance or mixture

| | |
|------------------|---|
| Fire hazard | : Extremely flammable liquid and vapor. |
| Explosion hazard | : May form flammable/explosive vapor-air mixture. |
| Reactivity | : Vapors may form explosive mixture with air. |

5.3. Advice for firefighters

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

| | |
|------------------|--|
| General measures | : Remove ignition sources. Use special care to avoid static electric charges. No naked lights. No smoking. |
|------------------|--|

6.1.1. For non-emergency personnel

| | |
|----------------------|-----------------------------------|
| Emergency procedures | : Evacuate unnecessary personnel. |
|----------------------|-----------------------------------|

6.1.2. For emergency responders

| | |
|----------------------|---|
| Protective equipment | : Avoid breathing dust, mist or spray. Equip cleanup crew with proper protection. |
| Emergency procedures | : Ventilate area. |

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

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

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

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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 : No naked lights. 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. Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Provide good ventilation in process area to prevent formation of vapor.
- Hygiene measures : Wash Both hands thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : 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 : Heat sources. Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

2,2',5,5'-TETRACB UNLABELED (35693-99-3)

| | | |
|----------|------------------------|--------------------------------|
| USA OSHA | OSHA PEL (TWA) (mg/m3) | 0.5000000000 mg/m ³ |
|----------|------------------------|--------------------------------|

8.2. Exposure controls

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.
- Other information : When using, do not eat, drink or smoke.

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 : 114.23 g/mol
- Color : Colourless.
- Odor : No data available
- Odor threshold : No data available
- pH : No data available
- Relative evaporation rate (butyl acetate=1) : No data available
- Melting point : -107 °C (- 161 °F)
- Freezing point : No data available
- Boiling point : 99 °C (210 °F)
- Flash point : -12 °C (10 °F) - closed cup
- Self ignition temperature : 396 °C (745 °F)
- Decomposition temperature : No data available
- Flammability (solid, gas) : No data available
- Vapor pressure : 55 hPa (41 mmHg) at 21 °C (70 °F)
- Relative vapor density at 20 °C : 3.94 - (Air = 1.0)
- Relative density : No data available
- Density : 0.692 g/ml

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| | |
|----------------------|---------------------|
| Solubility | : Water: 0 % |
| Log Pow | : No data available |
| Log Kow | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosive properties | : No data available |
| Oxidizing properties | : No data available |
| Explosive limits | : 1 - 6 % (V) |

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Vapors may form explosive mixture with air.

10.2. Chemical stability

See storage and expiration date on CoA.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Sparks. Heat. Direct sunlight. Overheating. Open flame. Extremely high or low temperatures.

10.5. Incompatible materials

strong acids. Strong bases.

10.6. Hazardous decomposition products

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

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

| FULLY RESOLVED NATIVE MONO-DECA PCB MIXTURE UNLABELED | |
|---|------------------------------------|
| LC50 inhalation rat (mg/l) | 23760 mg/m ³ male - 4 h |
| LC50 inhalation rat (ppm) | 3200 ppm/4h |
| ATE (gases) | 3200.000 ppmV/4h |
| ATE (vapors) | 23.760 mg/l/4h |
| ATE (dust, mist) | 23.760 mg/l/4h |

| 3,4,4',5-TETRACB UNLABELED (70362-50-4) | |
|---|------------------------------------|
| | LD50 - Oral - guinea pig - 1 mg/kg |

| 3,4,4'-TRICB UNLABELED (38444-90-5) | |
|-------------------------------------|---------------------------|
| ATE (oral) | 500.000 mg/kg body weight |

| | |
|--|---|
| Skin corrosion/irritation | : Causes skin irritation. Skin - rat - Skin irritation - Draize test |
| Serious eye damage/irritation | : Not classified |
| Respiratory or skin sensitization | : Not classified Based on available data, the classification criteria are not met |
| Germ cell mutagenicity | : Not classified Based on available data, the classification criteria are not met |
| Carcinogenicity | : Not classified Based on available data, the classification criteria are not met |
| Reproductive toxicity | : Not classified Based on available data, the classification criteria are not met |
| Specific target organ toxicity (single exposure) | : May cause drowsiness or dizziness. |
| Specific target organ toxicity (repeated exposure) | : Not classified Based on available data, the classification criteria are not met |
| Aspiration hazard | : May be fatal if swallowed and enters airways. Based on available data, the classification criteria are not met |

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| | |
|---|---|
| Potential Adverse human health effects and symptoms | : Harmful if inhaled. |
| Symptoms/injuries after inhalation | : Danger of serious damage to health by prolonged exposure through inhalation. Harmful if inhaled. May cause drowsiness or dizziness. |
| Symptoms/injuries after skin contact | : Causes skin irritation. |
| Symptoms/injuries after eye contact | : Causes serious eye irritation. |

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Toxic to aquatic life with long lasting effects.

| 3,3',4,4'-TETRACB UNLABELED (32598-13-3) | |
|---|--|
| 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 |
| 3,4,4',5-TETRACB UNLABELED (70362-50-4) | |
| LC50 fish 1 | Pimephales promelas (fathead minnow) - 96 h |
| EC50 Daphnia 1 | Daphnia magna (Water flea) - 48 h |
| NOEC (chronic) | 0.1 mg/l Oncorhynchus mykiss (rainbow trout) - 7 d |
| 3,4,4'-TRICB UNLABELED (38444-90-5) | |
| LC50 fish 1 | 0.034 mg/l Pimephales promelas (fathead minnow) - 96 h |
| 2,2',6,6'-TETRACB UNLABELED (15968-05-5) | |
| LC50 fish 1 | Pimephales promelas (fathead minnow) - 96 h |
| EC50 Daphnia 1 | Daphnia magna (Water flea) - 48 h |
| NOEC (chronic) | 0.1 mg/l Oncorhynchus mykiss (rainbow trout) - 7 d |
| 2,2',5,5'-TETRACB UNLABELED (35693-99-3) | |
| LC50 fish 1 | Pimephales promelas (fathead minnow) - 96 h |
| EC50 Daphnia 1 | Daphnia magna (Water flea) - 48 h |
| NOEC (chronic) | 0.1 mg/l Oncorhynchus mykiss (rainbow trout) - 7 d |
| 2-MONOCB UNLABELED (2051-60-7) | |
| LC50 fish 1 | 0.54 mg/l Oncorhynchus mykiss (rainbow trout) - 96 h |
| EC50 Daphnia 1 | 0.71 mg/l Daphnia magna (Water flea) - 48 h |
| 4-MONOCB UNLABELED (2051-62-9) | |
| LC50 fish 1 | 0.72 mg/l Oncorhynchus mykiss (rainbow trout) - 96 h |
| EC50 Daphnia 1 | 0.42 mg/l Daphnia magna (Water flea) - 48 h |
| 4,4'-DICB UNLABELED (2050-68-2) | |
| EC50 Daphnia 1 | 0.45 mg/l Daphnia magna (Water flea) - 48 h |
| 2,2',5-TRICB UNLABELED (37680-65-2) | |
| LC50 fish 1 | 0.034 mg/l Pimephales promelas (fathead minnow) - 96 h |
| 2',3,4-TRICB UNLABELED (38444-86-9) | |
| LC50 fish 1 | 0.034 mg/l Pimephales promelas (fathead minnow) - 96 h |
| 2,2',4,4',5,5'-HEXACB UNLABELED (35065-27-1) | |
| LC50 fish 1 | Pimephales promelas (fathead minnow) - 96 h |
| EC50 Daphnia 1 | Daphnia magna (Water flea) - 48 h |

12.2. Persistence and degradability

FULLY RESOLVED NATIVE MONO-DECA PCB MIXTURE UNLABELED

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

12.3. Bioaccumulative potential

FULLY RESOLVED NATIVE MONO-DECA PCB MIXTURE UNLABELED

Bioaccumulative potential : Not established.

3,3',4,4'-TETRACB UNLABELED (32598-13-3)

Bioconcentration factor (BCF REACH) : 81.5

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| | |
|---|--|
| 3,3',4,4'-TETRACB UNLABELED (32598-13-3) | |
| Bioaccumulative potential | Bioaccumulation: Oryzias latipes - 20 d Bioconcentration factor (BCF): 81.5. |
| 2,3',4,4',5-PENTACB UNLABELED (31508-00-6) | |
| Log Pow | 7.12 |
| 4-MONOCB UNLABELED (2051-62-9) | |
| BCF fish 1 | >= 0.5 mg/l Oryzias latipes - 20 d |
| Bioconcentration factor (BCF REACH) | >= 54 |
| 2,2',5-TRICB UNLABELED (37680-65-2) | |
| Log Pow | 5.56 |
| 2,4'-DICB UNLABELED (34883-43-7) | |
| Log Pow | 5.242 |

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

- Other adverse effects : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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

SECTION 14: Transport information

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

14.1. UN number

- UN-No.(DOT) : 1262
- DOT NA no. UN1262

14.2. UN proper shipping name

- DOT Proper Shipping Name : Octanes
- Department of Transportation (DOT) Hazard Classes : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
- Hazard labels (DOT) : 3 - Flammable liquid



- Packing group (DOT) : II - Medium Danger
- DOT Special Provisions (49 CFR 172.102) : IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). 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. T4 - 2.65 178.274(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) : 202
- DOT Packaging Bulk (49 CFR 173.xxx) : 242
- Marine pollutant : No



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14.3. Additional information

Other information : No supplementary information available.

Overland transport

Packing group (ADR) : II
Class (ADR) : 3 - Flammable liquid
Hazard identification number (Kemler No.) : 33
Classification code (ADR) : F1
Danger labels (ADR) : 3 - Flammable liquids



Orange plates : An orange rectangular label with a black border, divided into two horizontal sections. The top section contains the number '33' and the bottom section contains the number '1262'.

Tunnel restriction code : D/E
Limited quantities (ADR) : 1L
EAC : 3YE
Excepted quantities (ADR) : E2

Transport by sea

DOT Vessel Stowage Location : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.

MFAG-No : 128

Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L

14.4. Environmental hazards

Dangerous for the environment :



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

FULLY RESOLVED NATIVE MONO-DECA PCB MIXTURE UNLABELED

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

ISOCTANE UNLABELED (540-84-1)

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

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15.2. International regulations

CANADA

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

15.2.1. National regulations

No additional information available

15.3. US State regulations

FULLY RESOLVED NATIVE MONO-DECA PCB MIXTURE UNLABELED()

| | |
|----------------------------|---|
| 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 This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm. |
|----------------------------|---|

ISOCTANE UNLABELED (540-84-1)

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

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. 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 |
| Asp. Tox. 1 | Aspiration hazard Category 1 |
| Carc. 1B | Carcinogenicity (inhalation) Category 1B |
| Carc. 1B | Carcinogenicity Category 1B |
| Eye Dam. 1 | Serious eye damage/eye irritation Category 1 |
| Flam. Liq. 2 | Flammable liquids Category 2 |
| 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 |
| H225 | Highly flammable liquid and vapor |
| H302 | Harmful if swallowed |
| H304 | May be fatal if swallowed and enters airways |
| H315 | Causes skin irritation |
| H318 | Causes serious eye damage |
| H336 | May cause drowsiness or dizziness |
| H350 | May cause cancer |
| H350i | May cause cancer by inhalation |
| 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 |
| R11 | Highly flammable |
| R20 | Harmful by inhalation |
| R22 | Harmful if swallowed |
| R28 | Very toxic if swallowed |
| R33 | Danger of cumulative effects |
| R38 | Irritating to skin |

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| | |
|--------------|---|
| R41 | Risk of serious damage to eyes |
| R45 | May cause cancer |
| R48 | Danger of serious damage to health by prolonged exposure |
| R48/20 | Harmful: danger of serious damage to health by prolonged exposure through inhalation |
| R48/20/21/22 | Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed |
| R50/53 | Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment |
| R67 | Vapors may cause drowsiness and dizziness |
| F | Highly flammable |
| N | Dangerous for the environment |
| T+ | Very toxic |
| Xi | Irritant |
| Xn | Harmful |

NFPA health hazard

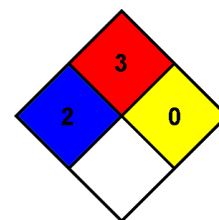
: 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard

: 3 - Liquids and solids that can be ignited under almost all ambient conditions.

NFPA reactivity

: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



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