

# Safety Data Sheet

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

Rules and Regulations

Date of issue: 20/03/2015 Revision date: : Version: 1.0

CLM-1996-S

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

1.1. Product identifier

Product form : Mixtures

Product name. : 2,3,4,5-TETRABROMOPHENOL (13C6, 99%) 100 UG/ML IN TOLUENE

Product code : CLM-1996-S

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

1.2.1. Relevant identified uses

Industrial/Professional use spec : For professional use only.

#### 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 <a href="mailto:cilsales@isotope.com">cilsales@isotope.com</a> www.isotope.com

#### **Emergency telephone number**

Emergency numbers:

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

### **SECTION 2: Hazards identification**

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

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

Flam. Liq. 2 H225 Acute Tox. 4 (Inhalation:dust,mist) H332 Skin Irrit. 2 H315 Eve Irrit. 2 H319 Carc. 2 H351 H361 Repr. 2 STOT SE 3 H336 STOT SE 2 H371 STOT RE 2 H373 Asp. Tox. 1 H304 Aquatic Acute 1 H400

Full text of H-phrases: see section 16

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

Carc.Cat.3; R40 Repr.Cat.3; R62 Repr.Cat.3; R63

F; R11 Xn; R20 Xn; R65 Xi; R36/38

Full text of R-phrases: see section 16

# Classification (GHS-US)

Flam. Liq. 2 H225 Acute Tox. 4 (Inhalation:vapour) H332 Skin Irrit. 2 H315 Eye Irrit. 2A H319

20/03/2015 EN (English US) 1/11

# 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

Carc. 2 Repr. 2	H351 H361
STOT SE 3	H336
STOT SE 2	H371
STOT RE 2	H373
Asp. Tox. 1	H304
Aquatic Acute 1	H400

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

Bladder, Liver, Kidney, Brain.

#### 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 H319 - Causes serious eye irritation

H332 - Harmful if inhaled

H336 - May cause drowsiness or dizziness

H351 - Suspected of causing cancer

H361 - Suspected of damaging fertility. Suspected of damaging the unborn child

H371 - May cause damage to organs (liver, kidneys, brain)

H373 - May cause damage to organs (eye, brain, liver, kidneys, urinary bladder) through

prolonged or repeated exposure H400 - Very toxic to aquatic life

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 ventilating, lighting, electrical equipment

P260 - Do not breathe vapors, spray, mist, gas, fume, dust P264 - Wash Both hands thoroughly after handling P270 - Do no eat, drink or smoke when using this product P271 - Use only outdoors or in a well-ventilated area

### **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

H319 - Causes serious eye irritation

H332 - Harmful if inhaled

H336 - May cause drowsiness or dizziness

H351 - Suspected of causing cancer (Dermal, Inhalation, oral)

H361 - Suspected of damaging fertility or the unborn child (Dermal, Inhalation, oral) H371 - May cause damage to organs (eye, brain, liver, kidneys, urinary bladder) (Dermal,

Inhalation, oral)

H373 - May cause damage to organs (eye, brain, liver, kidneys, urinary bladder) through

prolonged or repeated exposure (Dermal, Inhalation, oral)

H400 - Very toxic to aquatic life

Precautionary statements (GHS-US) : P201 - Obtain special instructions before use

P202 - Do not handle until all safety precautions have been read and understood P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking

20/03/2015 EN (English US) 2/11

# 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

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

P260 - Do not breathe vapors, spray, mist, gas, fume, dust

P261 - Avoid breathing dust, fume, gas, mist, spray, vapors

P264 - Wash Both hands thoroughly after handling

P270 - Do no eat, drink or smoke when using this product

P271 - Use only outdoors or in a well-ventilated area

P273 - Avoid release to the environment

P280 - Wear protective gloves, protective clothing, face protection, eye protection

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

P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P308+P313 - IF exposed or concerned: Get medical advice/attention

P312 - Call a POISON CENTER/doctor/physician if you feel unwell

P314 - Get medical advice and attention 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

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., Water spray, Dry chemical. 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

P501 - Dispose of contents/container to Comply with applicable regulations.

# Other hazards

No additional information available

# **SECTION 3: Composition/information on ingredients**

Not applicable

#### 3.2. **Mixtures**

Name	Product identifier	%	Classification according to Directive 67/548/EEC
TOLUENE UNLABELED	(CAS No) 108-88-3 (EC no) 203-625-9 (EC index no) 601-021-00-3	99.9884	Repr.Cat.3; R62 Repr.Cat.3; R63 F; R11 Xi; R36/38 Carc.Cat.3; R40 N; R51 Xn; R20 R67 Xn; R65
2,3,4,5-TETRABROMOPHENOL (13C6, 99%)	(CAS No) 4526-58-3 (Unlabeled)	0.0116	Xn; R20/21/22
Name	Product identifier	%	Classification according to
			Regulation (EC) No. 1272/2008 [CLP]

20/03/2015 EN (English US) 3/11

# 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

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2,3,4,5-TETRABROMOPHENOL (13C6, 99%)	(CAS No) 4526-58-3 (Unlabeled)	0.0116	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation:dust,mist), H332
Name	Product identifier	%	Classification (GHS-US)
TOLUENE UNLABELED	(CAS No) 108-88-3	99.9884	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332

Name	Product identifier	%	Classification (GHS-US)
TOLUENE UNLABELED	(CAS No) 108-88-3	99.9884	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319
			Carc. 2, H351 Repr. 2, H361 STOT SE 3, H336 STOT SE 2, H371 Asp. Tox. 1, H304 Aquatic Acute 1, H400

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

### **SECTION 4: First aid measures**

#### 4.1. Description of first aid measures

First-aid measures general : Specific

: Specific treatment (see Hazard pictograms (CLP) on this label). IF exposed or concerned: Get

medical advice/attention. May cause cancer.

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 : Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water.

Wash contaminated clothing before reuse.

First-aid measures after eye contact : Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

First-aid measures after ingestion : Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth

with water. Consult a physician.

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

Symptoms/injuries : Suspected of damaging the unborn child (Inhalation, dermal, oral). Causes damage to organs

(brain, liver, kidneys, urinary bladder) (Inhalation, dermal, oral).

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 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 : Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

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

Fire hazard : Highly 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

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 : Use personal protective equipment, and ensure adequate ventilation. Avoid breathing vapors, mist, gas. Remove ignition sources, and move personnel to safe area. Vapors accumulate

especially in low areas to form explosive concentrations.

especially in low areas to form explosive concentrations.

### 6.1.2. For emergency responders

Protective equipment : Avoid breathing dust, mist or spray.

20/03/2015 EN (English US) 4/11

# 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

#### **Environmental precautions**

Avoid release to the environment.

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

For containment

: Contain spillage, and then collect with an electrically protected vacuum cleaner or by wetbrushing and place in container for disposal according to local regulations.

#### Reference to other sections

No additional information available

#### **SECTION 7: Handling and storage**

#### 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. Use only non-sparking tools. Use only outdoors or in a wellventilated area. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

Hygiene measures

: Handle in accordance with good industrial hygiene and safety practice. Wash hands before

breaks and at the end of workday.

# Conditions for safe storage, including any incompatibilities

Technical measures

Storage conditions

: Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical equipment.

: Store at room temperature away from light and moisture.

Incompatible materials : Heat sources.

#### Specific end use(s)

No additional information available

#### **SECTION 8: Exposure controls/personal protection**

#### **Control parameters**

<b>TOLUENE UNLABELED (108</b>	-88-3)	
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	20.0000000000 ppm Visual impairment, Female reproductive, Pregnancy loss
USA OSHA	OSHA PEL (TWA) (ppm)	100.0000000000 ppm USA. OSHA - TABLE Z-1 Limits for Air Contaminants 1910.1000
USA OSHA	OSHA PEL (STEL) (ppm)	150.0000000000 ppm USA. OSHA - TABLE Z-1 Limits for Air Contaminants 1910.1000

#### **Exposure controls**

Personal protective equipment

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









Hand protection Eye protection

: Wear suitable protective clothing and gloves. Wear suitable protective clothing and gloves.

Skin and body protection

Wear suitable protective clothing.

Respiratory protection

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

# **SECTION 9: Physical and chemical properties**

# 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. Color : Colouress Odor : No data available. Odor threshold No data available No data available pΗ Relative evaporation rate (butyl acetate=1) : No data available : -93 °C (-135 °F) Melting point Freezing point : No data available

20/03/2015 EN (English US) 5/11

# 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

Boiling point : 110 - 111 °C (230 - 232 °F)
Flash point : 4.0 °C (39.2 °F) - closed cup

Self ignition temperature : 535 °C (995 °F)

Decomposition temperature : No data available

Flammability (solid, gas) : Highly flammable liquid and vapor

Vapor pressure : 29.1 hPa (21.8 mmHg) at 20.0 °C (68.0 °F)

Relative vapor density at 20 °C : No data available Relative density : No data available

Density : 0.865 g/ml at 25 °C (77 °F)

Solubility : No data available Log Pow : No data available Log Kow : No data available : No data available Viscosity, kinematic Viscosity, dynamic : No data available Explosive properties : No data available : No data available Oxidizing properties Explosive limits : 1.2 - 7 % (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

No additional information available

# 10.4. Conditions to avoid

Open flame. Direct sunlight.

# 10.5. Incompatible materials

Strong oxidizing agents.

# 10.6. Hazardous decomposition products

May release flammable gases.

# **SECTION 11: Toxicological information**

# 11.1. Information on toxicological effects

Acute toxicity : Harmful if inhaled.

2,3,4,5-TETRABROMOPHENOL (13C6, 99%) 100 UG/ML IN TOLUENE	
LD50 oral rat	> 5580 mg/kg
LD50 dermal rabbit	12196 mg/kg
LC50 inhalation rat (mg/l)	12500 - 28800 mg/m³ 4 h
ATE (dermal)	12196.000 mg/kg body weight
ATE (vapors)	12.500 mg/l/4h
ATE (dust, mist)	1.500 mg/l/4h

2,3,4,5-TETRABROMOPHENOL (13C6, 99%) (4526-58-3 (Unlabeled))	
ATE (oral)	500.000 mg/kg body weight
ATE (dermal)	1100.000 mg/kg body weight
ATE (dust, mist)	1.500 mg/l/4h

TOLUENE UNLABELED (108-88-3)	
LD50 oral rat	> 5580 mg/kg
LD50 dermal rabbit	12196 mg/kg
LC50 inhalation rat (mg/l)	12500 - 28800 mg/m³ 4 h
ATE (dermal)	12196.000 mg/kg body weight
ATE (gases)	4500.000 ppmV/4h
ATE (vapors)	12.500 mg/l/4h

20/03/2015 EN (English US) 6/11

# 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

TOLUENE UNLABELED (108-88-3)	
ATE (dust, mist)	1.500 mg/l/4h
Skin corrosion/irritation	: Causes skin irritation. Skin - rabbit - Skin irritation - 24 h
Serious eye damage/irritation	: Causes serious eye irritation.  No data available
Respiratory or skin sensitization	: Not available No data available
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Suspected of causing cancer.
Reproductive toxicity Specific target organ toxicity (single exposure)	<ul><li>Experiments have shown reproductive toxicity effects in male and female laboratory animals.</li><li>May cause drowsiness or dizziness. May cause damage to organs (liver, kidneys, brain).</li><li>No data available</li></ul>
Specific target organ toxicity (repeated exposure)	<ul> <li>May cause damage to organs (eye, brain, liver, kidneys, urinary bladder) through prolonged or repeated exposure.</li> <li>No data available</li> </ul>
Aspiration hazard	: May be fatal if swallowed and enters airways.
Potential Adverse human health effects and symptoms	: Harmful if inhaled.
IARC group	: 3
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 eye irritation.

# **SECTION 12: Ecological information**

# 12.1. Toxicity

Ecology - water : Very toxic to aquatic life.

2,3,4,5-TETRABROMOPHENOL (13C6, 99%) 100 UG/ML IN TOLUENE	
LC50 fish 1	74 - 340 mg/l Lepomis macrochirus (Bluegill) - 96h
LC50 other aquatic organisms 1	10 mg/l Pseudokirchneriella subcapitata (Green algae) - 24 h
EC50 Daphnia 1	8 mg/l Daphnia magna (Water flea) - 24h
LC50 fish 2	7.63 mg/l Oncorhynchus mykiss (Rainbow trout) - 96 h
EC50 Daphnia 2	6 mg/l Daphnia magna (Water flea) - Immobilization - 48 h
ErC50 (algae)	245 mg/l Chlorella vulgaris (Fresh water algae) - 24 h
LOEC (chronic)	8.04 mg/l Pimephales promelas (Fathead minnow) - 7 d
NOEC (chronic)	5.44 mg/l Pimephales promelas (fathead minnow) - 7 d

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

# 12.2. Persistence and degradability

2,3,4,5-TETRABROMOPHENOL (13C6, 99%) (4526-58-3 (Unlabeled))	
Persistence and degradability	Not available.

#### 12.3. Bioaccumulative potential

2,3,4,5-TETRABROMOPHENOL (13C6, 99%) 1	00 UG/ML IN TOLUENE
Bioaccumulative potential	Not available.

20/03/2015 EN (English US) 7/11

# Safety Data Sheet

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

2,3,4,5-TETRABROMOPHENOL (13C6, 99%) (4526-58-3 (Unlabeled))		
Bioaccumulative potential	Not available.	

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

Bioaccumulative potential Not available.

#### 12.4. Mobility in soil

#### 2,3,4,5-TETRABROMOPHENOL (13C6, 99%) 100 UG/ML IN TOLUENE

Ecology - soil Not available.

#### 2,3,4,5-TETRABROMOPHENOL (13C6, 99%) (4526-58-3 (Unlabeled))

Ecology - soil Not available.

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

Ecology - soil Not 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.

Toxic to aquatic life.

#### **SECTION 13: Disposal considerations**

#### 13.1. Waste treatment methods

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

environmental control regulations.

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

Additional information : Handle empty containers with care because residual vapors are flammable.

#### **SECTION 14: Transport information**

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

### 14.1. UN number

UN-No.(DOT) : 1294 DOT NA no. UN1294

#### 14.2. UN proper shipping name

DOT Proper Shipping Name : Toluene

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

#### 14.3. Additional information

Other information : No supplementary information available.

# Overland transport

Packing group (ADR) : II

Class (ADR) : 3 - Flammable liquid

20/03/2015 EN (English US) 8/11

# 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

Hazard identification number (Kemler No.) : 33
Classification code (ADR) : F1

Danger labels (ADR) : 3 - Flammable liquids



Orange plates :

33 1294

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 : 130

Air transport

DOT Quantity Limitations Passenger aircraft/rail : 5 L

(49 CFR 173.27)

DOT Quantity Limitations Cargo aircraft only (49 : 60 L

CFR 175.75)

Civil Aeronautics Law : Flammable liquids

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

2,3,4,5-TETRABROMOPHENOL (13C6, 99%) 100 UG/ML IN TOLUENE

Listed on SARA Section 313 (Specific toxic chemical listings)

SARA Section 311/312 Hazard Classes

Fire hazard
Immediate (acute) health hazard

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

Listed on SARA Section 313 (Specific toxic chemical listings)

SARA Section 311/312 Hazard Classes Fire hazard

Immediate (acute) health hazard Delayed (chronic) health hazard

Delayed (chronic) health hazard

20/03/2015 EN (English US) 9/11

# 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

#### 15.2. International regulations

#### **CANADA**

#### 2,3,4,5-TETRABROMOPHENOL (13C6, 99%) 100 UG/ML IN TOLUENE

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

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

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

#### 15.2.1. National regulations

No additional information available

#### 15.3. US State regulations

2,3,4,5-TETRABROMOPHENOL (13C6, 99%) 100 UG/ML IN TOLUENE()	
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
	WARNING! This product contains a chemical known by the state of California to cause
	birth defects or other reproductive harm.

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

U.S. - Massachusetts - Right To Know List

U.S. - Pennsylvania - RTK (Right to Know) List

U.S. - New Jersey - Right to Know Hazardous Substance List

WARNING! This product contains a chemical known by the state of California to cause birth defects or other reproductive harm.

# **SECTION 16: Other information**

Other information

: 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 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Asp. Tox. 1	Aspiration hazard Category 1
Carc. 2	Carcinogenicity Category 2
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Flam. Liq. 2	Flammable liquids Category 2
Repr. 2	Reproductive toxicity Category 2
Repr. 2	Reproductive toxicity Category 2
Skin Irrit. 2	skin corrosion/irritation Category 2
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
STOT SE 2	Specific target organ toxicity (single exposure) Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H225	Highly flammable liquid and vapor
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H312	Harmful in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H332	Harmful if inhaled
H336	May cause drowsiness or dizziness
H351	Suspected of causing cancer
H361	Suspected of damaging fertility or the unborn child
H361d	Suspected of damaging the unborn child
H371	May cause damage to organs

20/03/2015 EN (English US) 10/11

# 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

H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
R11	Highly flammable
R20	Harmful by inhalation
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed
R36/38	Irritating to eyes and skin
R40	Limited evidence of a carcinogenic effect
R51	Toxic to aquatic organisms
R62	Possible risk of impaired fertility
R63	Possible risk of harm to the unborn child
R65	Harmful: may cause lung damage if swallowed
R67	Vapors may cause drowsiness and dizziness
F	Highly flammable
N	Dangerous for the environment
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

20/03/2015 EN (English US) 11/11