



5% ETHYL TRANS-CROTONATE + 1% TMS IN CDCL3 IN A 7" SEALED NMR TUBE/FILL HEIGHT 50MM

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: 27/08/2014

Revision date:

:

Version: 1.0

DLM-7049

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

1.1. Product identifier

Product form : Mixtures
Product name. : 5% ETHYL TRANS-CROTONATE + 1% TMS IN CDCL3 IN A 7" SEALED NMR TUBE/FILL HEIGHT 50MM
Product code : DLM-7049

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. 1	H224
Acute Tox. 4 (Oral)	H302
Acute Tox. 1 (Inhalation)	H330
Skin Irrit. 2	H315
Eye Irrit. 2	H319
Carc. 2	H351
Repr. 2	H361
STOT SE 3	H336
STOT RE 2	H373

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+; R12
T; R23
Xn; R22
Xn; R48/22
Xi; R36/38

Full text of R-phrases: see section 16

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Classification (GHS-US)

Flam. Liq. 1	H224
Acute Tox. 4 (Oral)	H302
Acute Tox. 1 (Inhalation)	H330
Acute Tox. 1 (Inhalation:vapour)	H330
Skin Irrit. 2	H315
Eye Irrit. 2A	H319
Carc. 2	H351
Repr. 2	H361
STOT SE 3	H336
STOT RE 2	H373
Aquatic Acute 3	H402

Adverse physicochemical, human health and environmental effects

Central nervous system, Blood, Liver, Cardiovascular system, Kidney.

2.2. Label elements

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

Hazard pictograms (CLP)



Signal word (CLP)

: Danger

Hazardous ingredients

: CHLOROFORM-D (D, 99.8%)

Hazard statements (CLP)

: H224 - Extremely flammable liquid and vapor
H302 - Harmful if swallowed
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H330 - Fatal if inhaled
H336 - May cause drowsiness or dizziness
H351 - Suspected of causing cancer
H361 - central nervous system, blood, liver, cardiovascular system, kidneys
H373 - May cause damage to organs (central nervous system, blood, liver, cardiovascular system, kidneys) through prolonged or repeated exposure

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
P260 - Do not breathe fume, 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

GHS-US labeling

Hazard pictograms (GHS-US)



Signal word (GHS-US)

: Danger

Hazard statements (GHS-US)

: H224 - Extremely flammable liquid and vapor
H302 - Harmful if swallowed
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H330 - Fatal if inhaled
H336 - May cause drowsiness or dizziness
H351 - Suspected of causing cancer (Inhalation, Dermal, oral)
H361 - Suspected of damaging fertility or the unborn child (Dermal, Inhalation, oral)
H373 - May cause damage to organs (central nervous system, blood, liver, cardiovascular system, kidneys) through prolonged or repeated exposure (oral, Inhalation, Dermal)
H402 - Harmful to aquatic life

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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, open flames, hot surfaces, 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 P260 - Do not breathe dust, fume, gas, mist, vapors, spray P261 - Avoid breathing fume, 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 clothing, protective gloves P284 - Wear respiratory protection P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell 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 P310 - Immediately call a POISON CENTER or doctor/physician P312 - Call a POISON CENTER/doctor/physician if you feel unwell P314 - Get medical advice and attention if you feel unwell P320 - Specific treatment is urgent (see Hazard pictograms (CLP) on this label) P321 - Specific treatment (see Hazard pictograms (CLP) on this label) P330 - If swallowed, rinse mouth P332+P313 - If skin irritation occurs: Get medical advice/attention P337+P313 - If eye irritation persists: Get medical advice/attention P362 - Take off contaminated clothing and wash before reuse P370+P378 - In case of fire: Use Alcohol resistant foam., Carbon dioxide., Dry chemical., Water spray for extinction P403+P233 - Store in a well-ventilated place. Keep container tightly closed P403+P235 - Store in a well-ventilated place. Keep cool P405 - Store locked up P501 - Dispose of contents/container to Comply with applicable regulations.
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2.3. Other hazards

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
CHLOROFORM-D (D, 99.8%)	(CAS No) 865-49-6 (EC no) 200-663-8 (EC index no) 602-006-00-4	96.418	Carc.Cat.3; R40 T; R23 Xi; R36/38 Xn; R22 Xn; R48/22 R67 Repr.Cat.3; R62 Repr.Cat.3; R63
ETHYL TRANS-CROTONATE UNLABELED	(CAS No) 623-70-1 (EC no) 210-808-7	3.139	F; R11
TETRAMETHYLSILANE 99.9%	(CAS No) 75-76-3 (Unlabeled) (EC no) 200-899-1	0.443	F+; R12

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
CHLOROFORM-D (D, 99.8%)	(CAS No) 865-49-6 (EC no) 200-663-8 (EC index no) 602-006-00-4	96.418	Acute Tox. 4 (Oral), H302 Acute Tox. 2 (Inhalation:vapour), H330 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Carc. 2, H351 Repr. 2, H361fd STOT SE 3, H336 STOT RE 2, H373
ETHYL TRANS-CROTONATE UNLABELED	(CAS No) 623-70-1 (EC no) 210-808-7	3.139	Flam. Liq. 2, H225 Eye Irrit. 2, H319
TETRAMETHYLSILANE 99.9%	(CAS No) 75-76-3 (Unlabeled) (EC no) 200-899-1	0.443	Flam. Liq. 1, H224

Name	Product identifier	%	Classification (GHS-US)
CHLOROFORM-D (D, 99.8%)	(CAS No) 865-49-6	96.418	Acute Tox. 4 (Oral), H302 Acute Tox. 1 (Inhalation), H330 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Carc. 2, H351 Repr. 2, H361 STOT SE 3, H336 STOT RE 2, H373 Aquatic Acute 3, H402
ETHYL TRANS-CROTONATE UNLABELED	(CAS No) 623-70-1	3.139	Flam. Liq. 2, H225 Eye Irrit. 2A, H319

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	: Assure fresh air breathing. Allow the victim to rest.
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 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. Call a POISON CENTER/doctor/physician if you feel unwell.

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

Symptoms/injuries after inhalation	: May be harmful if inhaled. Causes respiratory tract irritation.
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: Causes serious eye irritation.
Symptoms/injuries after ingestion	: Swallowing a small quantity of this material will result in serious health hazard.

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.

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.

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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 : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

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

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.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Provide good ventilation in process area to prevent formation of vapor. No naked lights. No smoking. Take precautionary measures against static discharge. Use only non-sparking tools. 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.

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 : Sources of ignition. Direct sunlight. Heat sources.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

CHLOROFORM-D (D, 99.8%) (865-49-6)		
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	10.000000000 ppm Confirmed animal carcinogen with unknown relevance to humans.
USA NIOSH	NIOSH REL (STEL) (mg/m3)	9.78 mg/m ³
USA NIOSH	NIOSH REL (STEL) (ppm)	2 ppm
USA OSHA	OSHA PEL (TWA) (mg/m3)	240
USA OSHA	OSHA PEL (TWA) (ppm)	50 ppm

8.2. Exposure controls

Personal protective equipment : Protective clothing. Protective goggles. Self-contained breathing apparatus. Gloves.



Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or safety glasses.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : Wear approved mask.

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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, clear.
Molecular mass	: 120.38
Color	: Colorless.
Odor	: characteristic.
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: -63 °C (-81 °F)
Freezing point	: No data available
Boiling point	: 60.5 - 61.5 °C (140.9 - 142.7 °F)
Flash point	: No data available
Self ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Extremely flammable liquid and vapor
Vapor pressure	: 213.3 hPa (160.0 mmHg) at 20.0 °C (68.0 °F)
Relative vapor density at 20 °C	: No data available
Relative density	: 1.492 g/mL at 25 °C (77 °F)
Solubility	: No data available
Log Pow	: 1.97
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	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable if stored under recommended conditions.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

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

10.5. Incompatible materials

strong acids. Strong bases.

10.6. Hazardous decomposition products

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

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Harmful if swallowed. Fatal if inhaled.

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ATE (oral)	500.000 mg/kg body weight
ATE (gases)	10.000 ppmV/4h
ATE (vapors)	0.050 mg/l/4h

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ATE (dust, mist)	0.005 mg/l/4h

CHLOROFORM-D (D, 99.8%) (865-49-6)	
LD50 dermal rabbit	> 20000 mg/kg
LC50 inhalation rat (ppm)	500 ppm/4h
ATE (oral)	500.000 mg/kg body weight
ATE (gases)	500.000 ppmV/4h
ATE (vapors)	0.500 mg/l/4h

ETHYL TRANS-CROTONATE UNLABELED (623-70-1)	
LD50 oral rat	3000 mg/kg
ATE (oral)	3000.000 mg/kg body weight

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
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	: Suspected of causing cancer.
Reproductive toxicity	: central nervous system, blood, liver, cardiovascular system, kidneys. Based on available data, the classification criteria are not met
Specific target organ toxicity (single exposure)	: May cause drowsiness or dizziness. Based on available data, the classification criteria are not met
Specific target organ toxicity (repeated exposure)	: May cause damage to organs (central nervous system, blood, liver, cardiovascular system, kidneys) through prolonged or repeated exposure.
Aspiration hazard	: Not classified Based on available data, the classification criteria are not met
Potential Adverse human health effects and symptoms	: Harmful if swallowed.
Symptoms/injuries after inhalation	: May be harmful if inhaled. Causes respiratory tract irritation.
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: Causes serious eye irritation.
Symptoms/injuries after ingestion	: Swallowing a small quantity of this material will result in serious health hazard.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Very toxic to aquatic life.

CHLOROFORM-D (D, 99.8%) (865-49-6)	
LC50 fish 1	162.00 mg/l <i>Leuciscus idus</i> (Golden orfe) - 48 h
EC50 Daphnia 1	79.00 mg/l <i>Daphnia magna</i> (Water flea) - 48 h
EC50 other aquatic organisms 1	51.6 mg/l <i>Daphnia magna</i> (Water flea) - 48 h
LC50 fish 2	97 mg/l Other fish - 96 h
ErC50 (algae)	500.00 mg/l 24 h
NOEC (chronic)	122 mg/l <i>Oryzias latipes</i> (Japanese rice fish) - 10 d
NOEC chronic fish	24 mg/l <i>Oncorhynchus mykiss</i> (Rainbow trout) - 96 h
NOEC chronic algae	120 mg/l <i>Daphnia magna</i> (Water flea) - 11 d

12.2. Persistence and degradability

5% ETHYL TRANS-CROTONATE + 1% TMS IN CDCL3 IN A 7" SEALED NMR TUBE/FILL HEIGHT 50MM	
Persistence and degradability	Not established.

CHLOROFORM-D (D, 99.8%) (865-49-6)	
Persistence and degradability	Not available.

TETRAMETHYLSILANE 99.9% (75-76-3 (Unlabeled))	
Persistence and degradability	Not available.

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ETHYL TRANS-CROTONATE UNLABELED (623-70-1)	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

5% ETHYL TRANS-CROTONATE + 1% TMS IN CDCL3 IN A 7" SEALED NMR TUBE/FILL HEIGHT 50MM	
Log Pow	1.97
Bioaccumulative potential	Not established.

CHLOROFORM-D (D, 99.8%) (865-49-6)	
BCF fish 1	0.11 mg/l <i>Lepomis macrochirus</i> (Bluegill) - 14 d
Bioconcentration factor (BCF REACH)	6
Log Pow	1.97
Bioaccumulative potential	Not available.

TETRAMETHYLSILANE 99.9% (75-76-3 (Unlabeled))	
Bioaccumulative potential	Not available.

ETHYL TRANS-CROTONATE UNLABELED (623-70-1)	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

CHLOROFORM-D (D, 99.8%) (865-49-6)	
Ecology - soil	Not available.

TETRAMETHYLSILANE 99.9% (75-76-3 (Unlabeled))	
Ecology - soil	Not available.

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)	: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact licensed disposal company to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an after burner and scrubber.
Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to Comply with applicable regulations.
Additional information	: Handle empty containers with care because residual vapors are flammable.
Ecology - waste materials	: Avoid release to the environment.

SECTION 14: Transport information

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

14.1. UN number	
UN-No.(DOT)	: 1888
DOT NA no.	UN1888

14.2. UN proper shipping name

DOT Proper Shipping Name	: Chloroform
Department of Transportation (DOT) Hazard Classes	: 6.1 - Class 6.1 - Poisonous materials 49 CFR 173.132
Hazard labels (DOT)	: 6.1 - Poison inhalation hazard



Packing group (DOT) : III - Minor Danger

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DOT Special Provisions (49 CFR 172.102)	: 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). N36 - Aluminum or aluminum alloy construction materials are permitted only for halogenated hydrocarbons that will not react with aluminum. T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3) TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 153
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 203
DOT Packaging Bulk (49 CFR 173.xxx)	: 241
Marine pollutant	: No

14.3. Additional information

Other information : No supplementary information available.

Overland transport

Packing group (ADR)	: III
Class (ADR)	: 6.1 - Toxic substances
Hazard identification number (Kemler No.)	: 60
Classification code (ADR)	: T1
Danger labels (ADR)	: 6.1 - Toxic substances



Orange plates :

Tunnel restriction code	: E
Limited quantities (ADR)	: 5L
EAC	: 2Z
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.
DOT Vessel Stowage Other	: 40 - Stow "clear of living quarters"
MFAG-No	: 151

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	: Toxic and infectious substances/Toxic substances

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

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Listed on SARA Section 302 (Specific toxic chemical listings)
Listed on SARA Section 313 (Specific toxic chemical listings)

SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard
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CHLOROFORM-D (D, 99.8%) (865-49-6)

Listed on SARA Section 302 (Specific toxic chemical listings)
Listed on SARA Section 313 (Specific toxic chemical listings)

SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard
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ETHYL TRANS-CROTONATE UNLABELED (623-70-1)

SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard
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15.2. International regulations

CANADA

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

CHLOROFORM-D (D, 99.8%) (865-49-6)

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

15.2.1. National regulations

No additional information available

15.3. US State regulations

5% ETHYL TRANS-CROTONATE + 1% TMS IN CDCL3 IN A 7" SEALED NMR TUBE/FILL HEIGHT 50MM()

U.S. - California - Proposition 65 - Carcinogens List	Yes
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	Yes
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Yes
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 cancer, birth defects or other reproductive harm.

CHLOROFORM-D (D, 99.8%) (865-49-6)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
Yes		Yes	Yes	

CHLOROFORM-D (D, 99.8%) (865-49-6)

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 cancer, birth defects or other reproductive harm.

5% ETHYL TRANS-CROTONATE + 1% TMS IN CDCL3 IN A 7" SEALED NMR TUBE/FILL HEIGHT 50MM DLM-7049

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

ETHYL TRANS-CROTONATE UNLABELED (623-70-1)

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

SECTION 16: Other information

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

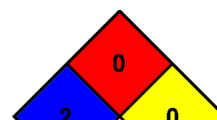
Other information : This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the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

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

Acute Tox. 1 (Inhalation)	Acute toxicity (inhalation) Category 1
Acute Tox. 2 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 2
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Carc. 2	Carcinogenicity Category 2
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Flam. Liq. 1	Flammable liquids Category 1
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 3	Specific target organ toxicity (single exposure) Category 3
H224	Extremely flammable liquid and vapor
H225	Highly flammable liquid and vapor
H302	Harmful if swallowed
H315	Causes skin irritation
H319	Causes serious eye irritation
H330	Fatal if inhaled
H336	May cause drowsiness or dizziness
H351	Suspected of causing cancer
H361	Suspected of damaging fertility or the unborn child
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child
H373	May cause damage to organs through prolonged or repeated exposure
R11	Highly flammable
R12	Extremely flammable
R22	Harmful if swallowed
R23	Toxic by inhalation
R36/38	Irritating to eyes and skin
R40	Limited evidence of a carcinogenic effect
R48/22	Harmful: danger of serious damage to health by prolonged exposure if swallowed
R62	Possible risk of impaired fertility
R63	Possible risk of harm to the unborn child
R67	Vapors may cause drowsiness and dizziness
F	Highly flammable
F+	Extremely flammable
T	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 : 0 - Materials that will not burn.



5% ETHYL TRANS-CROTONATE + 1% TMS IN CDCL3 IN A 7" SEALED NMR TUBE/FILL HEIGHT 50MM DLM-7049

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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 : 0 Minimal Hazard
Physical : 1 Slight 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