



# 1,2,3-TRICHLOROPROPANE UNLABELED 1 MG/ML IN METHANOL

## 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: 09/06/2016

Revision date:

Version: 1.0

**ULM-6911-S**

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

### 1.1. Product identifier

Product form : Mixture  
Product name. : 1,2,3-TRICHLOROPROPANE UNLABELED 1 MG/ML IN METHANOL  
Product code : ULM-6911-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  
[cilsales@isotope.com](mailto:cilsales@isotope.com) [www.isotope.com](http://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
Acute Tox. 3 (Oral)	H301
Acute Tox. 3 (Dermal)	H311
Acute Tox. 3 (Inhalation)	H331
Skin Irrit. 2	H315
Eye Irrit. 2	H319
STOT SE 1	H370

Full text of H-phrases: see section 16

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

F; R11  
T; R23/24/25  
Xi; R36/38

Full text of R-phrases: see section 16

#### GHS-US classification

Flam. Liq. 2	H225
Acute Tox. 3 (Oral)	H301
Acute Tox. 3 (Dermal)	H311
Acute Tox. 3 (Inhalation)	H331
Skin Irrit. 2	H315
Eye Irrit. 2A	H319
STOT SE 1	H370

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

Eyes, Kidney, Liver, Heart, Central nervous system.

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#### 2.2. Label elements

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

Hazard pictograms (CLP)



Signal word (CLP)

: Danger

Hazardous ingredients

: 1,2,3-TRICHLOROPROPANE UNLABELED, 100% METHANOL UNLABELED

Hazard statements (CLP)

: H225 - Highly flammable liquid and vapour  
H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H370 - Causes damage to organs (brain, heart, kidneys, liver, eye)

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 dust, fume, gas, mist, spray, vapours  
P264 - Wash Both hands thoroughly after handling  
P270 - Do not eat, drink or smoke when using this product  
P271 - Use only outdoors or in a well-ventilated area  
P307+P311 - IF exposed: Call a POISON CENTER or doctor/physician

##### GHS-US labelling

Hazard pictograms (GHS-US)



Signal word (GHS-US)

: Danger

Hazard statements (GHS-US)

: H225 - Highly flammable liquid and vapour  
H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H370 - Causes damage to organs (brain, heart, kidneys, liver, eye) (Dermal, Inhalation, oral)

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  
P260 - Do not breathe dust, gas, fume, mist, spray, vapours  
P261 - Avoid breathing dust, fume, gas, mist, spray, vapours  
P264 - Wash Both hands thoroughly after handling  
P270 - Do not eat, drink or smoke when using this product  
P271 - Use only outdoors or in a well-ventilated area  
P280 - Wear eye protection, face protection, protective clothing, protective gloves  
P301+P310 - IF SWALLOWED: immediately call a 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  
P311 - Call a POISON CENTER or doctor/physician  
P312 - Call a POISON CENTER/doctor/physician if you feel unwell  
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  
P361 - Remove/Take off immediately all contaminated clothing  
P362 - Take off contaminated clothing and wash before reuse  
P363 - Wash contaminated clothing before reuse

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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.

#### 2.3. Other hazards

No additional information available

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixture

Name	Product identifier	%	Classification according to Directive 67/548/EEC
100% METHANOL UNLABELED	(CAS No) 67-56-1 (EC no) 200-659-6 (EC index no) 603-001-00-X	99.87	F; R11 T; R23/24/25 T; R39/23/24/25 Xi; R36/37/38
1,2,3-TRICHLOROPROPANE UNLABELED substance listed as REACH Candidate (1,2,3-Trichloropropane)	(CAS No) 96-18-4 (EC no) 202-486-1 (EC index no) 602-062-00-X	0.13	F; R11 T; R23/24/25 T; R39/23/24/25

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
100% METHANOL UNLABELED	(CAS No) 67-56-1 (EC no) 200-659-6 (EC index no) 603-001-00-X	99.87	Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation:vapour), H331 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 1, H370
1,2,3-TRICHLOROPROPANE UNLABELED substance listed as REACH Candidate (1,2,3-Trichloropropane)	(CAS No) 96-18-4 (EC no) 202-486-1 (EC index no) 602-062-00-X	0.13	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Eye Irrit. 2, H319 Muta. 2, H341 Carc. 1B, H350i Repr. 1B, H360Df STOT RE 1, H372 STOT RE 2, H373 Aquatic Chronic 2, H411

Name	Product identifier	%	GHS-US classification
100% METHANOL UNLABELED	(CAS No) 67-56-1	99.87	Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation:vapour), H331 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 1, H370
1,2,3-TRICHLOROPROPANE UNLABELED	(CAS No) 96-18-4	0.13	Flam. Liq. 4, H227 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Eye Irrit. 2A, H319 Muta. 2, H341 Carc. 1B, H350 Repr. 1B, H360 STOT RE 1, H372 STOT RE 2, H373 Aquatic Acute 2, H401 Aquatic Chronic 2, H411

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

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#### SECTION 4: First aid measures

##### 4.1. Description of first aid measures

- |                                       |   |
|---------------------------------------|---|
| First-aid measures general            | : Call a POISON CENTER or doctor/physician. Specific treatment (see Hazard pictograms (CLP) on this label).   |
| First-aid measures after inhalation   | : Remove to fresh air and keep at rest in a position comfortable for breathing.   |
| First-aid measures after skin contact | : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Immediately call a POISON CENTER or doctor/physician. Wash with plenty of soap and water. Specific measures (see Hazard pictograms (CLP) on this label). Wash contaminated clothing before reuse. If skin irritation occurs: Wash with plenty of soap and water. Get medical advice/attention. Specific treatment (see Hazard pictograms (CLP) on this label). |
| First-aid measures after eye contact  | : Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes.  |
| 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                    | : May cause cancer (Inhalation, dermal, oral). Causes damage to organs (brain, heart, kidneys, liver, Eyes) (Inhalation, dermal, oral).                           |
| Symptoms/injuries after inhalation   | : May be harmful if inhaled. Causes respiratory tract irritation.   |
| Symptoms/injuries after skin contact | : Repeated exposure to this material can result in absorption through skin causing significant health hazard. Toxic in contact with skin. Causes skin irritation. |
| Symptoms/injuries after eye contact  | : Causes eye irritation.  |
| Symptoms/injuries after ingestion    | : Toxic if swallowed. 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 | : Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide. |
|------------------------------|---|

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

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

##### 5.3. Advice for firefighters

- |                                |   |
|--------------------------------|---|
| Firefighting instructions      | : Use water spray to cool unopened containers.  |
| 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. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. |
|----------------------|--|

##### 6.1.2. For emergency responders

- |                      |  |
|----------------------|--|
| Protective equipment | : Avoid breathing dust, mist or spray. |
|----------------------|--|

##### 6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

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

- |                 |  |
|-----------------|--|
| For containment | : Contain spillage, then collect with non-combustible absorbent material. Disposal should be in accordance with applicable Federal, State and local regulations. |
|-----------------|--|

##### 6.4. Reference to other sections

No additional information available

#### SECTION 7: Handling and storage

##### 7.1. Precautions for safe handling

- |                                   |   |
|-----------------------------------|---|
| Additional hazards when processed | : Handle empty containers with care because residual vapours are flammable. |
|-----------------------------------|---|

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Precautions for safe handling : No naked lights. No smoking. Use only non-sparking tools. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust, mist or spray.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash Both hands thoroughly after handling.

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

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

Storage conditions : Store at room temperature away from light and moisture.

Incompatible materials : Heat sources.

#### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

1,2,3-TRICHLOROPROPANE UNLABELED 1 MG/ML IN METHANOL		
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	200.0000000000 ppm Headache. Eye damage. Danger of cutaneous absorption.
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	250.0000000000 ppm Headache Eye damage. Danger of cutaneous absorption.

1,2,3-TRICHLOROPROPANE UNLABELED (96-18-4)		
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	10.0000000000 ppm Eye & Upper Respiratory Tract irritation, Liver & Kidney damage
USA OSHA	OSHA PEL (TWA) (ppm)	50.0000000000 ppm Upper respiratory

100% METHANOL UNLABELED (67-56-1)		
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	200.0000000000 ppm Headache. Eye damage. Danger of cutaneous absorption.
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	250.0000000000 ppm Headache Eye damage. Danger of cutaneous absorption.
USA OSHA	OSHA PEL (TWA) (ppm)	200.0000000000 ppm Skin notation.
USA OSHA	OSHA PEL (STEL) (ppm)	250.0000000000 ppm Skin notation.

### 8.2. Exposure controls

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



Hand protection : Wear suitable protective clothing and gloves.

Eye protection : Wear safety glasses with side shields (or goggles) and a face shield.

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

### 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	: 32.04 g/mol
Colour	: Colourless.
Odour	: Pungent.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: -98 °C (-144 °F)
Freezing point	: No data available
Boiling point	: 64.7 °C (148.5 °F)

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Flash point	: 9.7 °C (49.5 °F) - closed cup
Self ignition temperature	: 455 °C (851 °F) at 1,013 hPa (760 mmHg)
Decomposition temperature	: No data available
Flammability (solid, gas)	: Highly flammable liquid and vapour
Vapour pressure	: 546.6 hPa (410.0 mmHg) at 50.0 °C (122.0 °F)
Relative vapour density at 20 °C	: 1.11
Relative density	: No data available
Density	: 0.791 g/ml at 25 °C (77 °F)
Solubility	: Water: Completely miscible
Log Pow	: -0.77
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: 6 - 36 % (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

Acid chlorides, Acid anhydrides, Oxidizing agents, Alkali metals. Reducing agents, Acids.

#### 10.6. Hazardous decomposition products

May release flammable gases.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Toxic if swallowed. Toxic in contact with skin. Toxic if inhaled.

1,2,3-TRICHLOROPROPANE UNLABELED 1 MG/ML IN METHANOL	
LD50 oral rat	152 mg/kg male and female
LD50 dermal rabbit	523 mg/kg (OECD Test Guideline 402)
LC50 inhalation rat (mg/l)	> 4800 µg/m³ male and female (OECD Test Guideline 403) - 4 h
LC50 inhalation rat (ppm)	64000 ppm 4 h
ATE (oral)	100.000 mg/kg bodyweight
ATE (dermal)	300.000 mg/kg bodyweight
ATE (gases)	700.000 ppmV/4h
ATE (vapours)	3.000 mg/l/4h
ATE (dust,mist)	0.500 mg/l/4h
1,2,3-TRICHLOROPROPANE UNLABELED (96-18-4)	
LD50 oral rat	152 mg/kg male and female
LD50 dermal rabbit	523 mg/kg (OECD Test Guideline 402)
LC50 inhalation rat (mg/l)	> 4800 µg/m³ male and female (OECD Test Guideline 403) - 4 h
ATE (oral)	149.600 mg/kg bodyweight
ATE (dermal)	515.200 mg/kg bodyweight
ATE (gases)	700.000 ppmV/4h
ATE (vapours)	3.000 mg/l/4h
ATE (dust,mist)	0.500 mg/l/4h

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100% METHANOL UNLABELED (67-56-1)	
LD50 oral rat	5628 mg/kg
LD50 dermal rabbit	15800 mg/kg
LC50 inhalation rat (ppm)	64000 ppm 4 h
ATE (oral)	100.000 mg/kg bodyweight
ATE (dermal)	300.000 mg/kg bodyweight
ATE (vapours)	3.000 mg/l/4h

Skin corrosion/irritation	: Causes skin irritation. Skin - rabbit - Skin irritation - 24 h
Serious eye damage/irritation	: Causes serious eye irritation. Eyes - rabbit - Eye irritation - 24 h
Respiratory or skin sensitisation	: Not available No data available
Germ cell mutagenicity	: Not available
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Causes damage to organs (brain, heart, kidneys, liver, eye). Causes damage to organs
Specific target organ toxicity (repeated exposure)	: Not classified No data available
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Toxic if swallowed. Toxic in contact with skin.
IARC group	: 2A
Symptoms/injuries after inhalation	: May be harmful if inhaled. Causes respiratory tract irritation.
Symptoms/injuries after skin contact	: Repeated exposure to this material can result in absorption through skin causing significant health hazard. Toxic in contact with skin. Causes skin irritation.
Symptoms/injuries after eye contact	: Causes eye irritation.
Symptoms/injuries after ingestion	: Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

## SECTION 12: Ecological information

### 12.1. Toxicity

1,2,3-TRICHLOROPROPANE UNLABELED 1 MG/ML IN METHANOL	
LC50 fishes 1	19000.00 mg/l Oncorhynchus mykiss (rainbow trout) - 96 h
EC50 Daphnia 1	24500.00 mg/l Daphnia magna (Water flea) - 48 h

1,2,3-TRICHLOROPROPANE UNLABELED (96-18-4)	
LC50 fishes 1	66.5 mg/l flow-through test - Pimephales promelas (fathead minnow) - 96 h
EC50 Daphnia 1	4.1 mg/l Ceriodaphnia dubia (Water flea) - 48 h
EC50 other aquatic organisms 1	101 mg/l Growth inhibition - Pseudokirchneriella subcapitata (algae) - 72 h (OECD Test Guideline 201)

100% METHANOL UNLABELED (67-56-1)	
LC50 fishes 1	19000.00 mg/l Oncorhynchus mykiss (rainbow trout) - 96 h
EC50 Daphnia 1	24500.00 mg/l Daphnia magna (Water flea) - 48 h

### 12.2. Persistence and degradability

1,2,3-TRICHLOROPROPANE UNLABELED (96-18-4)	
Persistence and degradability	Aerobic - exposure time: 28 d.
Biodegradation	0 % - Not readily biodegradable. (OECD Test Guideline 301C)

### 12.3. Bioaccumulative potential

1,2,3-TRICHLOROPROPANE UNLABELED 1 MG/ML IN METHANOL	
Log Pow	-0.77

1,2,3-TRICHLOROPROPANE UNLABELED (96-18-4)	
Bioconcentration factor (BCF REACH)	5.3 - 13 (OECD Test Guideline 305) Cyprinus carpio (Carp) - 42 d



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#### 1,2,3-TRICHLOROPROPANE UNLABELED (96-18-4)

Log Pow	2.63 at 25 °C (77 °F)
Bioaccumulative potential	Not available.

#### 100% METHANOL UNLABELED (67-56-1)

Log Pow	-0.77
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#### 12.4. Mobility in soil

#### 1,2,3-TRICHLOROPROPANE UNLABELED (96-18-4)

Ecology - soil	Not available.
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#### 12.5. Results of PBT and vPvB assessment

#### 1,2,3-TRICHLOROPROPANE UNLABELED (96-18-4)

This substance/mixture does not meet the PBT criteria of REACH, annex XIII.
This substance/mixture does not meet the vPvB criteria of REACH, annex XIII.

#### 12.6. Other adverse effects

No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Regional legislation (waste)	: Waste materials should be disposed of under conditions which meet Federal, State, and Local environmental control regulations.
Waste disposal recommendations	: Dispose of as unused product.
Additional information	: Handle empty containers with care because residual vapours are flammable.
Ecology - waste materials	: Hazardous waste due to toxicity.

### SECTION 14: Transport information

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

#### 14.1. UN number

UN-No.(DOT)	: 1230
DOT NA no.	UN1230

#### 14.2. UN proper shipping name

DOT Proper Shipping Name	: Methanol
Department of Transportation (DOT) Hazard Classes	: 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
Hazard labels (DOT)	: 3 - Flammable liquid 6.1 - Poison inhalation hazard



DOT Symbols	: + - Fixes (cannot be altered) proper shipping name, hazard class, and packing group, I - Proper shipping name appropriate for international and domestic transportation
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. 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)	: 150
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 202
DOT Packaging Bulk (49 CFR 173.xxx)	: 242



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#### 14.3. Additional information

Other information : No supplementary information available.

#### Overland transport

Packing group (ADR) : II  
Class (ADR) : 3 - Flammable liquids  
Hazard identification number (Kemler No.) : 336  
Classification code (ADR) : FT1  
Danger labels (ADR) : 3 - Flammable liquids  
6.1 - Toxic substances



Orange plates :

Tunnel restriction code : D/E  
Limited quantities (ADR) : 1L  
EAC code : •2WE  
APP code : A(fl)  
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.  
DOT Vessel Stowage Other : 40 - Stow "clear of living quarters"  
MFAG-No : 131

#### Air transport

DOT Quantity Limitations Passenger aircraft/rail : 1 L  
(49 CFR 173.27)  
DOT Quantity Limitations Cargo aircraft only (49 : 60 L  
CFR 175.75)  
Civil Aeronautics Law : Flammable liquids(Hazardous materials notice Appended Table 1 Article 194 of the Enforcement Regulations)

#### 14.4. Environmental hazards

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

##### 1,2,3-TRICHLOROPROPANE UNLABELED 1 MG/ML IN METHANOL

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

##### 1,2,3-TRICHLOROPROPANE UNLABELED (96-18-4)

Listed on SARA Section 313 (Specific toxic chemical listings)

# 1,2,3-TRICHLOROPROPANE UNLABELED 1 MG/ML IN METHANOL

## ULM-6911-S

### 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

#### 1,2,3-TRICHLOROPROPANE UNLABELED (96-18-4)

SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard
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#### 100% METHANOL UNLABELED (67-56-1)

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
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#### 15.2. International regulations

##### CANADA

#### 1,2,3-TRICHLOROPROPANE UNLABELED 1 MG/ML IN METHANOL

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

#### 1,2,3-TRICHLOROPROPANE UNLABELED (96-18-4)

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

#### 100% METHANOL UNLABELED (67-56-1)

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

##### 15.2.1. National regulations

No additional information available

#### 15.3. US State regulations

#### 1,2,3-TRICHLOROPROPANE UNLABELED 1 MG/ML IN METHANOL()

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.
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#### 1,2,3-TRICHLOROPROPANE UNLABELED (96-18-4)

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.

#### 100% METHANOL UNLABELED (67-56-1)

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  
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. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 3 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2

# 1,2,3-TRICHLOROPROPANE UNLABELED 1 MG/ML IN METHANOL

## ULM-6911-S

### 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. 1B	Carcinogenicity (inhalation) Category 1B
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
Muta. 2	Germ cell mutagenicity, Category 2
Repr. 1B	Reproductive toxicity, Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT RE 1	Specific target organ toxicity — Repeated exposure, Category 1
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
STOT SE 1	Specific target organ toxicity — single exposure, Category 1
H225	Highly flammable liquid and vapour
H301	Toxic if swallowed
H311	Toxic in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H331	Toxic if inhaled
H341	Suspected of causing genetic defects
H350i	May cause cancer by inhalation
H360Df	May damage the unborn child. Suspected of damaging fertility
H370	Causes damage to organs
H372	Causes damage to organs through prolonged or repeated exposure
H373	May cause damage to organs through prolonged or repeated exposure
H411	Toxic to aquatic life with long lasting effects
R11	Highly flammable
R23/24/25	Toxic by inhalation, in contact with skin and if swallowed
R36/37/38	Irritating to eyes, respiratory system and skin
R36/38	Irritating to eyes and skin
R39/23/24/25	Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed
F	Highly flammable
T	Toxic
Xi	Irritant

#### NFPA health hazard

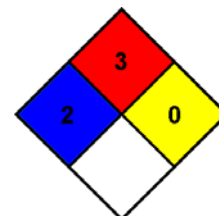
: 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

#### 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*