N-NITROSOPYRROLIDINE UNLABELED 1 MG/ML IN METHYLENE CHLORIDE

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 08/11/2013 Revision date: 14/08/2018 Supersedes: 08/11/2013 Version: 2.0

ULM-8253-S

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

1.1. Product identifier

Product form : Mixtures

Product name : N-NITROSOPYRROLIDINE UNLABELED 1 MG/ML IN METHYLENE CHLORIDE

Product code : ULM-8253-S

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

1.2.1. Relevant identified uses

Main use category : Professional use

Industrial/Professional use spec : For professional use only

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

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

USA: 1-800-322-1174 Int: 1-978-749-8000
cilsales@isotope.com www.isotope.com

Emergency telephone number

Emergency numbers:

Chemtrec: 1-800-424-9300 (24 hours)
International: 1-703-741-5970 (24 hours)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Acute Tox. 4 (Oral)	H302
Acute Tox. 4 (Dermal)	H312
Skin Irrit. 2	H315
Eye Irrit. 2	H319
Carc. 2	H351
STOT SE 3	H336
STOT SE 3	H335
STOT RE 2	H373

Full text of hazard classes and H-statements : see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Xi; R36/37/38
Carc.Cat.3; R40
T; R48/25
R67
Xn; R21/22

Full text of R-phrases: see section 16

GHS-US classification

Acute Tox. 4 (Oral)	H302
Acute Tox. 4 (Dermal)	H312
Skin Irrit. 2	H315
Eye Irrit. 2A	H319
Carc. 2	H351
STOT SE 3	H336
STOT SE 3	H335
STOT RE 2	H373

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

Liver, Pancreas, Blood, Central nervous system, Heart, Kidney. Inhalation: anesthetic effects, nausea and drunkeness. Suspected of causing cancer (in contact with skin, if swallowed, if inhaled). May cause damage to organs (liver, blood, central nervous system) through prolonged or repeated exposure (if swallowed, if inhaled). May cause drowsiness or dizziness. Harmful in contact with skin. Harmful if swallowed. May cause respiratory irritation. Causes skin irritation. Causes serious eye irritation.

2.2. Label elements

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

Hazard pictograms (CLP) :

GHS08 GHS07

Signal word (CLP) : Warning

Hazard statements (CLP) : H302+H312 - Harmful if swallowed or in contact with skin
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H335 - May cause respiratory irritation
H336 - May cause drowsiness or dizziness
H351 - Suspected of causing cancer (in contact with skin, if inhaled, if swallowed)
H373 - May cause damage to organs (central nervous system, blood, liver) through prolonged or repeated exposure (oral, inhalation)

Precautionary statements (CLP) : P260 - Do not breathe dust, fume, gas, mist, spray, vapors.
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 protective clothing, protective gloves.
P301+P312 - IF SWALLOWED: Call a doctor, a POISON CENTER if you feel unwell.
P302+P352 - IF ON SKIN: Wash with plenty of water.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.

GHS-US labeling

Hazard pictograms (GHS-US) :

GHS08 GHS07

Signal word (GHS-US) : Warning

Hazard statements (GHS-US) : H302+H312 - Harmful if swallowed or in contact with skin
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H335 - May cause respiratory irritation
H336 - May cause drowsiness or dizziness
H351 - Suspected of causing cancer (Dermal, Inhalation, oral)
H373 - May cause damage to organs (blood, central nervous system, liver, respiratory system) through prolonged or repeated exposure (Dermal, Inhalation, oral)

Precautionary statements (GHS-US) : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P260 - Do not breathe dust, fume, gas, mist, spray, vapors.
P261 - Avoid breathing dust, fume, gas, mist, spray, vapors.
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+P312 - If swallowed: Call a doctor, a POISON CENTER if you feel unwell
P302+P352 - If on skin: Wash with plenty of water
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P308+P313 - If exposed or concerned: Get medical advice/attention.
P312 - Call a doctor, a POISON CENTER if you feel unwell
P314 - Get medical advice/attention if you feel unwell.

P321 - Specific treatment (see Hazard pictograms (CLP) on this label)
P330 - 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.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P405 - Store locked up.
P501 - Dispose of contents/container to Comply with applicable regulations

2.3. Other hazards

PBT: not relevant – no registration required

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Directive 67/548/EEC
METHYLENE CHLORIDE UNLABELED	(CAS-No.) 75-09-2 (EC-No.) 200-838-9 (EC Index-No.) 602-004-00-3 (REACH-no) 01-2119480404-41	99.925	Xi; R36/37/38 Carc.Cat.3; R40 T; R48/25 R67 Xn; R21/22
N-NITROSOPYRROLIDINE UNLABELED	(CAS-No.) 930-55-2 (unlabeled) (EC-No.) 213-218-8	0.075	Carc.Cat.3; R40

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
METHYLENE CHLORIDE UNLABELED	(CAS-No.) 75-09-2 (EC-No.) 200-838-9 (EC Index-No.) 602-004-00-3 (REACH-no) 01-2119480404-41	99.925	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Carc. 2, H351 STOT SE 3, H336 STOT SE 3, H335 STOT RE 2, H373
N-NITROSOPYRROLIDINE UNLABELED	(CAS-No.) 930-55-2 (unlabeled) (EC-No.) 213-218-8	0.075	Acute Tox. 4 (Oral), H302 Carc. 2, H351

Name	Product identifier	%	GHS-US classification
METHYLENE CHLORIDE UNLABELED	(CAS-No.) 75-09-2	99.925	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Carc. 2, H351 STOT SE 3, H336 STOT SE 3, H335 STOT RE 2, H373
N-NITROSOPYRROLIDINE UNLABELED	(CAS-No.) 930-55-2 (unlabeled)	0.075	Acute Tox. 4 (Oral), H302 Carc. 2, H351

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

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : IF exposed or concerned: Get medical advice/attention. Call a poison center/doctor/physician if you feel unwell.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor/physician if you feel unwell.

First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: 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. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Rinse mouth. Call a poison center/doctor/physician if you feel unwell.

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

Symptoms/effects : May cause drowsiness or dizziness.

Symptoms/effects after inhalation	:	May be harmful if inhaled. May cause respiratory irritation.
Symptoms/effects after skin contact	:	Harmful in contact with skin. Causes skin irritation.
Symptoms/effects after eye contact	:	Causes serious eye irritation.
Symptoms/effects after ingestion	:	Harmful if swallowed.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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

5.2. Special hazards arising from the substance or mixture

Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

5.3. Advice for firefighters

Firefighting instructions : Do not enter fire area without proper protective equipment, including respiratory protection.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. Wear recommended personal protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Use personal protective equipment as required. Ventilate spillage area. Do not breathe dust, fume, gas, mist, spray, vapors. Avoid contact with skin, eyes and clothing.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3. Methods and material for containment and cleaning up

For containment : Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Do not breathe dust, fume, spray, gas, mist, vapors. Use only outdoors or in a well-ventilated area. Do not get in eyes, on skin, or on clothing.

Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Store locked up. Store in a well-ventilated place. Keep container tightly closed. Containers which are opened should be properly resealed and kept upright to prevent leakage.

Storage conditions : Store refrigerated (-5 C to 5 C). Protect from light.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

N-NITROSOPYRROLIDINE UNLABELED 1 MG/ML IN METHYLENE CHLORIDE		
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	50.00000000 ppm Basis: USA. ACGIH Threshold Limit Values (TLV)

N-NITROSOPYRROLIDINE UNLABELED 1 MG/ML IN METHYLENE CHLORIDE		
Italy - Portugal - USA ACGIH	Remark (ACGIH)	Central Nervous system impairment. Carboxyhemoglobinemia. Substances for which there is a Biological Exposure Index or Indices (see BEI section). Confirmed animal carcinogen with unknown relevance to humans. Potential Occupational Carcinogen See Appendix A.
USA OSHA	OSHA PEL (STEL) (mg/m³)	435 mg/m³ Basis: California permissible exposure limits for chemical contaminants (Title 8, Article 107) see section 5202
USA OSHA	OSHA PEL (STEL) (ppm)	125 ppm Basis: OSHA Specifically Regulated Chemicals/Carcinogens California permissible exposure limits for chemical contaminants (Title 8, Article 107) see section 5202
USA OSHA	OSHA PEL (Ceiling) (mg/m³)	87 mg/m³ Basis: California permissible exposure limits for chemical contaminants (Title 8, Article 107) see section 5202
USA OSHA	OSHA PEL (Ceiling) (ppm)	25 ppm Basis: OSHA Specifically Regulated Chemicals/Carcinogens California permissible exposure limits for chemical contaminants (Title 8, Article 107) see section 5202
USA OSHA	Remark (OSHA)	Substance listed; for mor information see OSHA document 1910.1052. See Table Z-2. This section applies to all occupational exposures to methylene chloride (MC). Chemical Abstracts Service Registry Number 75-09-2, in general industry, construction and shipyard employment. Methylene chloride (MC) means an organic compound with chemical formula CH2Cl2. Its Chemical Abstracts Service Registry Number is 75-09-2. Its molecular weight is 8.9 g/mole. OSHA Specifically regulated carcinogen.

METHYLENE CHLORIDE UNLABELED (75-09-2)		
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	50.00000000 ppm Basis: USA. ACGIH Threshold Limit Values (TLV)
Italy - Portugal - USA ACGIH	Remark (ACGIH)	Central Nervous system impairment. Carboxyhemoglobinemia. Substances for which there is a Biological Exposure Index or Indices (see BEI section). Confirmed animal carcinogen with unknown relevance to humans. Potential Occupational Carcinogen See Appendix A.
USA OSHA	OSHA PEL (STEL) (mg/m³)	435 mg/m³ Basis: California permissible exposure limits for chemical contaminants (Title 8, Article 107) see section 5202
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N-NITROSOPYRROLIDINE UNLABELED 1 MG/ML IN METHYLENE CHLORIDE	
DNEL/DMEL (Workers)	
Acute - systemic effects, inhalation	706 mg/m³
Acute - local effects, inhalation	353 mg/m³
Long-term - systemic effects, dermal	4750 mg/kg bodyweight/day
DNEL/DMEL (General population)	
Acute - systemic effects, inhalation	353 mg/m³
Acute - local effects, inhalation	88.3 mg/m³
Long-term - systemic effects,oral	0.06 mg/kg bodyweight/day
Long-term - systemic effects, dermal	2395 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	0.54 mg/l
PNEC aqua (marine water)	0.194 mg/l
PNEC aqua (intermittent, freshwater)	0.27 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	4.47 mg/kg dwt
PNEC sediment (marine water)	1.61 mg/kg dwt
PNEC (Soil)	
PNEC soil	0.583 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	26 mg/l

8.2. Exposure controls

Appropriate engineering controls : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Ensure good ventilation of the work station.

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

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

Hand protection : Wear suitable protective clothing and gloves.

Eye protection : Wear eye protection. Chemical goggles or face shield with safety glasses. Safety glasses.

Skin and body protection : Wear suitable protective clothing, gloves and eye/face protection.

Respiratory protection : In case of inadequate ventilation wear respiratory protection. Approved supplied air respirator.

Environmental exposure controls : Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

The properties listed below are for the solvent, the main component of this mixture.

Physical state : Liquid

Appearance : Liquid

Molecular mass : 84.93 g/mol

Color : Colorless

Odor : Sweet, penetrating, ether-like odor

Odor threshold : No data available

pH : No data available

Relative evaporation rate (butyl acetate=1) : No data available

Relative evaporation rate (ether=1) : 0.71

Melting point : -97 °C (-143 °F)

Freezing point : No data available

Boiling point : 39.8 - 40 °C (103.6 - 104 °F)

Flash point : No data available

Auto-ignition temperature : 556.1 °C (1,033.0 °F); 622.0 °C (1,223.6 °F)

Decomposition temperature : No data available

Flammability (solid, gas) : Not applicable

Vapor pressure : 470.9 hPa (353.2 mmHg) at 20 °C (68 °F)

Relative vapor density at 20 °C	:	2.93 - (Air = 1.0)
Relative density	:	No data available
Specific gravity / density	:	1.325 g/ml at 25 °C (77 °F)
Solubility	:	Water: Slightly soluble
Log Pow	:	1.25
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
Explosion limits	:	12 - 19 % (V)

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

See storage and expiration date on CoA.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Heat. Sparks. Open flame. Direct sunlight. Protect from sunlight.

10.5. Incompatible materials

Alkali metals. Aluminum. Strong oxidizing agents. Bases. Magnesium. Strong acids. Strong bases. Vinyl.

10.6. Hazardous decomposition products

Carbon oxides (CO, CO2). Hydrogen chloride.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed. Dermal: Harmful in contact with skin.

N-NITROSOPYRROLIDINE UNLABELED 1 MG/ML IN METHYLENE CHLORIDE	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rat	> 2000 mg/kg (OECD Test Guideline 402)
LC50 inhalation rat (mg/l)	52000 mg/m³
ATE CLP (oral)	500.000 mg/kg body weight
ATE CLP (dermal)	1100.000 mg/kg body weight
ATE CLP (vapors)	52.000 mg/l/4h
ATE CLP (dust, mist)	52.000 mg/l/4h

N-NITROSOPYRROLIDINE UNLABELED (930-55-2 (unlabeled))	
LD50 oral rat	900 mg/kg
ATE CLP (oral)	900.000 mg/kg body weight

METHYLENE CHLORIDE UNLABELED (75-09-2)	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rat	> 2000 mg/kg (OECD Test Guideline 402)
LC50 inhalation rat (mg/l)	52000 mg/m³
ATE CLP (oral)	500.000 mg/kg body weight
ATE CLP (dermal)	1100.000 mg/kg body weight
ATE CLP (vapors)	52.000 mg/l/4h
ATE CLP (dust, mist)	52.000 mg/l/4h

Skin corrosion/irritation : Skin. rabbit. Irritating to skin. Result: 24 Hours

Serious eye damage/irritation : Eyes. rabbit. Result: Irritating to eyes. 24 Hours. (Draize Test)

Respiratory or skin sensitization : Not available

No data available

Germ cell mutagenicity : rat. DNA Damage

Carcinogenicity	:	Carcinogenicity. rat. Inhalation. Tumorigenic: Carcinogenic by RTECS criteria. endocrine system. Tumors. Limited evidence of a carcinogenic effect. Suspected human carcinogens
Reproductive toxicity	:	Not available
Specific target organ toxicity – single exposure	:	May cause respiratory irritation. May cause drowsiness or dizziness
Specific target organ toxicity – repeated exposure	:	Inhalation. May cause damage to organs (central nervous system) through prolonged or repeated exposure (Inhalation). Oral
Aspiration hazard	:	Not classified
Potential Adverse human health effects and symptoms	:	This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. stomach.
Symptoms/effects after inhalation	:	May be harmful if inhaled. May cause respiratory irritation.
Symptoms/effects after skin contact	:	Harmful in contact with skin. Causes skin irritation.
Symptoms/effects after eye contact	:	Causes serious eye irritation.
Symptoms/effects after ingestion	:	Harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

N-NITROSOPYRROLIDINE UNLABELED 1 MG/ML IN METHYLENE CHLORIDE	
LC50 fish 1	193 mg/l Pimephales promelas (fathead minnow) - 96 h
EC50 Daphnia 1	1682 mg/l Daphnia magna (Water flea) - 48 h
NOEC (chronic)	130 mg/l Cyprinodon variegatus (sheepshead minnow) - 96 h

METHYLENE CHLORIDE UNLABELED (75-09-2)	
LC50 fish 1	193 mg/l Pimephales promelas (fathead minnow) - 96 h
EC50 Daphnia 1	1682 mg/l Daphnia magna (Water flea) - 48 h
NOEC (chronic)	130 mg/l Cyprinodon variegatus (sheepshead minnow) - 96 h

12.2. Persistence and degradability

N-NITROSOPYRROLIDINE UNLABELED 1 MG/ML IN METHYLENE CHLORIDE	
Biodegradation	< 26 % - Not readily biodegradable. (OECD Test Guideline 301C)

N-NITROSOPYRROLIDINE UNLABELED (930-55-2 (unlabeled))	
Persistence and degradability	Not available.

METHYLENE CHLORIDE UNLABELED (75-09-2)	
Biodegradation	< 26 % - Not readily biodegradable. (OECD Test Guideline 301C)

12.3. Bioaccumulative potential

N-NITROSOPYRROLIDINE UNLABELED 1 MG/ML IN METHYLENE CHLORIDE	
Log Pow	1.25
Bioaccumulative potential	Does not accumulate in organisms.

N-NITROSOPYRROLIDINE UNLABELED (930-55-2 (unlabeled))	
Bioaccumulative potential	Not available.

METHYLENE CHLORIDE UNLABELED (75-09-2)	
Log Pow	1.25
Bioaccumulative potential	Does not accumulate in organisms.

12.4. Mobility in soil

N-NITROSOPYRROLIDINE UNLABELED 1 MG/ML IN METHYLENE CHLORIDE	
Ecology - soil	Not available.

N-NITROSOPYRROLIDINE UNLABELED (930-55-2 (unlabeled))	
Ecology - soil	Not available.

METHYLENE CHLORIDE UNLABELED (75-09-2)	
Ecology - soil	Not available.

12.5. Results of PBT and vPvB assessment

N-NITROSOPYRROLIDINE UNLABELED 1 MG/ML IN METHYLENE CHLORIDE
PBT: not relevant – no registration required

METHYLENE CHLORIDE UNLABELED (75-09-2)
PBT: not relevant – no registration required

12.6. Other adverse effects

Other adverse effects : Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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

Product/Packaging disposal recommendations : Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Ecology - waste materials : Dispose of as unused product.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No.(DOT) : 1593

DOT NA no. UN1593

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Dichloromethane

Class (DOT) : 6.1 - Class 6.1 - Poisonous materials 49 CFR 173.132

Hazard labels (DOT) : 6.1 - Poison

Packing group (DOT) : III - Minor Danger

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).
IP8 - Ammonia solutions may be transported in rigid or composite plastic IBCs (31H1, 31H2 and 31HZ1) that have successfully passed, without leakage or permanent deformation, the hydrostatic test specified in 178.814 of this subchapter at a test pressure that is not less than 1.5 times the vapor pressure of the contents at 55 C (131 F).
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

DOT RQ : 1000 lbs

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
Hazard labels (ADR)	:	6.1 - Toxic substances

Orange plates	:	60 1593
Tunnel restriction code (ADR)	:	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.
MFAG-No	:	160

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.

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

N-NITROSOPYRROLIDINE UNLABELED 1 MG/ML IN METHYLENE CHLORIDE	
Subject to reporting requirements of United States SARA Section 313	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard

N-NITROSOPYRROLIDINE UNLABELED (930-55-2 (unlabeled))	
SARA Section 302 Threshold Planning Quantity (TPQ)	SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313

METHYLENE CHLORIDE UNLABELED (75-09-2)	
Subject to reporting requirements of United States SARA Section 313	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard

15.2. International regulations

CANADA

N-NITROSOPYRROLIDINE UNLABELED 1 MG/ML IN METHYLENE CHLORIDE
Listed on the Canadian DSL (Domestic Substances List)

METHYLENE CHLORIDE UNLABELED (75-09-2)
Listed on the Canadian DSL (Domestic Substances List)

15.2.1. National regulations

No additional information available

15.3. US State regulations

N-NITROSOPYRROLIDINE UNLABELED 1 MG/ML IN METHYLENE CHLORIDE**()**	
U.S. - California - Proposition 65 - Carcinogens List	Yes
U.S. - California - Proposition 65 - Developmental Toxicity	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No
State or local regulations	U.S. - Massachusetts - Right To Know List U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List

N-NITROSOPYRROLIDINE UNLABELED (930-55-2 (unlabeled))				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
Yes	No	No	No	

METHYLENE CHLORIDE UNLABELED (75-09-2)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
Yes	No	No	No	

N-NITROSOPYRROLIDINE UNLABELED (930-55-2 (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

METHYLENE CHLORIDE UNLABELED (75-09-2)
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

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:

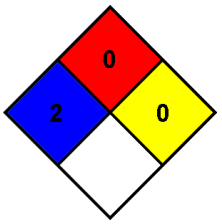
Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Carc. 2	Carcinogenicity Category 2
Eye Irrit. 2	Serious eye damage/eye irritation Category 2

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
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H302	Harmful if swallowed
H312	Harmful in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H351	Suspected of causing cancer
H373	May cause damage to organs through prolonged or repeated exposure
R21/22	Harmful in contact with skin and if swallowed
R36/37/38	Irritating to eyes, respiratory system and skin
R40	Limited evidence of a carcinogenic effect
R48/25	Toxic: danger of serious damage to health by prolonged exposure if swallowed
R67	Vapors may cause drowsiness and dizziness
T	Toxic
Xi	Irritant
Xn	Harmful

NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 0 Minimal 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