

# 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: 23/06/2016 Revision date: 20/08/2014 : Version: 2.0

#### **DLM-5022**

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

1.1. Product identifier

Product form : Mixture

Product name. : 2% 2-ETHYL-1-INDANONE IN CHLOROFORM-D

Product code : DLM-5022

#### 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.

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 <u>cilsales@isotope.com</u> 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. 3 (Inhalation:dust,mist) H331
Skin Irrit. 2 H315
Eye Irrit. 2 H319
Carc. 2 H351
Repr. 2 H361
STOT RE 1 H372

Full text of H-phrases: see section 16

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

Carc.Cat.3: R40

Full text of R-phrases: see section 16

# **GHS-US** classification

Acute Tox. 4 (Oral) H302
Acute Tox. 3 (Inhalation:dust,mist) H331
Skin Irrit. 2 H315
Eye Irrit. 2A H319
Carc. 2 H351
Repr. 2 H361
STOT RE 1 H372

# Adverse physicochemical, human health and environmental effects

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

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#### 2.2. Label elements

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

Hazard pictograms (CLP)







608 GHS06

GHS07

Signal word (CLP) : Danger

Hazardous ingredients : CHLOROFORM-D (D, 99.8%)

Hazard statements (CLP) : H302 - Harmful if swallowed

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H331 - Toxic if inhaled

H351 - Suspected of causing cancer

H361 - Suspected of damaging the unborn child

H372 - Causes damage to organs (central nervous system, blood, liver, kidneys, cardiovascular

system) through prolonged or repeated exposure

Precautionary statements (CLP) : P260 - Do not breathe dust, fume, gas, mist, spray, vapours

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
P280 - Wear protective clothing, protective gloves

P301+P312 - IF SWALLOWED: Call a POISON CENTER/doctor/.../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** labelling

Signal word (GHS-US)

Hazard pictograms (GHS-US)







: Danger

Hazard statements (GHS-US) : H302 - Harmful if swallowed

H315 - Causes skin irritation
H319 - Causes serious eye irritation

H331 - Toxic if inhaled

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

H361 - {0|message=Suspected of damaging fertility or the unborn child <state specific effect if known>|default=Suspected of damaging fertility or the unborn child|filter=(\_)?H\_361.+}

(Inhalation, Dermal, oral) (Inhalation, Dermal, oral)

H372 - Causes damage to organs (blood, cardiovascular system, central nervous system,

kidneys, liver) 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, vapours P261 - Avoid breathing dust, fume, gas, mist, spray, vapours 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

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

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

P311 - 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

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

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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

No additional information available

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

#### 3.1. Substances

Not applicable

#### 3.2 Mixture

3.2. Mixture			
Name	Product identifier	%	Classification according to Directive 67/548/EEC
CHLOROFORM-D (D, 99.8%)	(CAS No) 865-49-6 (EC no) 212-742-4 (EC index no) 602-006-00-4 (Unlabeled)	98.61	Carc.Cat.3; R40 T; R23 Xi; R36/38 Xn; R22 R67 Repr.Cat.3; R62 Repr.Cat.3; R63 R52 T; R48/23
2-ETHYL-1-INDANONE UNLABELED	(CAS No) 22351-56-0	1.39	Not classified
Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
CHLOROFORM-D (D, 99.8%)	(CAS No) 865-49-6 (EC no) 212-742-4 (EC index no) 602-006-00-4 (Unlabeled)	98.61	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Inhalation), H331 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Carc. 2, H351 Repr. 2, H361fd STOT SE 3, H336 STOT RE 1, H372
2-ETHYL-1-INDANONE UNLABELED	(CAS No) 22351-56-0	1.39	Not classified
Name	Product identifier	%	GHS-US classification
CHLOROFORM-D (D, 99.8%)	(CAS No) 865-49-6	98.61	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Inhalation), H331 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Carc. 2, H351 Repr. 2, H361 STOT SE 3, H336 STOT RE 1, H372 Aquatic Acute 3, H402

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

# **SECTION 4: First aid measures**

4.1.	Description	of firet	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 : Wash with plenty of soap and water. Wash contaminated clothing before reuse. Get medical

advice/attention.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to

do. Continue rinsing. Get medical advice/attention.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. 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

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#### 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

No additional information available

#### 5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any

chemical fire. Avoid (reject) fire-fighting water to enter environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

#### **SECTION 6: Accidental release measures**

#### 6.1. Personal precautions, protective equipment and emergency procedures

#### 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

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 : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect

spillage. Store aways 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

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 vapour.

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 : Keep container tightly closed in a cool, dry and well-ventilated place. Opened containers must be

carefully resealed and kept upright to prevent leakage.

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

Incompatible products : Strong bases. strong acids.
Incompatible materials : Sources of ignition. Direct sunlight.

# 7.3. Specific end use(s)

No additional information available

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

#### 8.1. Control parameters

CHLOROFORM-D (D, 99.8%) (865-49-6)		
Italy - Portugal - USA ACGIH	,	10.0000000000 ppm Confirmed animal carcinogen with unknown relevance to humans.
USA NIOSH	NIOSH REL (STEL) (mg/m3)	9.78 mg/m³
USA NIOSH	NIOSH REL (STEL) (ppm)	2 ppm
USA OSHA	OSHA PEL (Ceiling) (mg/m3)	240 mg/m³
USA OSHA	OSHA PEL (Ceiling) (ppm)	50 ppm

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#### 8.2. Exposure controls

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



Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or safety glasses.
Skin and body protection : Wear suitable protective clothing.

Respiratory protection : Wear approved mask.

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 g/mol (Labeled)

Colour

Colour

Colour

Colourless.

Colourless.

Characteristic.

No data available

PH

No data available

Relative evaporation rate (butylacetate=1)

Melting point

Colourless.

No data available

No data available

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) : Non flammable.

Vapour pressure : 213.3 hPa (160.0 mmHg) at 20.0 °C (68.0 °F)

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

Density : 1.5 g/mL at 25 °C (77 °F) (Labeled)

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
Oxidising 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.

# 10.5. Incompatible materials

strong acids. Strong bases.

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#### **Hazardous decomposition products**

fume. Carbon monoxide. Carbon dioxide.

# **SECTION 11: Toxicological information**

#### Information on toxicological effects

: Harmful if swallowed. Toxic if inhaled. Acute toxicity

2% 2-ETHYL-1-INDANONE IN CHLOROFORM-D	
LD50 oral rat	908 mg/kg
LD50 dermal rabbit	> 20000 mg/kg
LC50 inhalation rat (ppm)	500 ppm/4h
ATE (oral)	908.000 mg/kg bodyweight
ATE (gases)	500.000 ppmV/4h
ATE (vapours)	3.000 mg/l/4h
ATE (dust,mist)	0.500 mg/l/4h

CHLOROFORM-D (D, 99.8%) (865-49-6)	
LD50 oral rat	908 mg/kg
LD50 dermal rabbit	> 20000 mg/kg
LC50 inhalation rat (ppm)	500 ppm/4h
ATE (oral)	908.000 mg/kg bodyweight
ATE (gases)	500.000 ppmV/4h
ATE (vapours)	3.000 mg/l/4h
ATE (dust,mist)	0.500 mg/l/4h

Skin corrosion/irritation : Causes skin irritation.

No data available

Serious eye damage/irritation : Causes serious eye irritation.

No data available

Respiratory or skin sensitisation : Not available.

Based on available data, the classification criteria are not met

Germ cell mutagenicity : Not available.

Based on available data, the classification criteria are not met

Carcinogenicity : Suspected of causing cancer. Reproductive toxicity : Suspected reproductive toxicant.

Based on available data, the classification criteria are not met

Specific target organ toxicity (single exposure) : Not classified

Based on available data, the classification criteria are not met

Specific target organ toxicity (repeated

exposure)

: Causes damage to organs (central nervous system, blood, liver, kidneys, cardiovascular system)

through prolonged or repeated exposure.

No data available

: Not classified Aspiration hazard

Based on available data, the classification criteria are not met

Potential Adverse human health effects and

symptoms

: Harmful if swallowed.

IARC group

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**

#### **Toxicity**

Ecology - water : Very toxic to aquatic life.

2% 2-ETHYL-1-INDANONE IN CHLOROFORM-D	
LC50 fishes 1	162.00 mg/l Leuciscus idus (Golden orfe) - 48 h
LC50 other aquatic organisms 1	97 mg/l Other fish - 96 h
EC50 Daphnia 1	79.00 mg/l Daphnia magna (Water flea) - 48 h
EC50 other aquatic organisms 1	51.6 mg/l Daphnia magna (Water flea) - 48 h
LC50 fish 2	121 mg/l Danio rerio (Zebra fish) - 96 h

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ccording to Regulation (EC) No. 453/2010 and according	to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations	
2% 2-ETHYL-1-INDANONE IN CHLOROFORM	N-D	
LC50 other aquatic organisms 2	500 mg/l No information available - 24 h	
ErC50 (algae)	500.00 mg/l 24 h	
NOEC (chronic)	122 mg/l Oryzias latipes (Japanese rice fish) - 10 d	
CHLOROFORM-D (D, 99.8%) (865-49-6)		
LC50 fishes 1	162.00 mg/l Leuciscus idus (Golden orfe) - 48 h	
LC50 other aquatic organisms 1	97 mg/l Other fish - 96 h	
EC50 Daphnia 1	79.00 mg/l Daphnia magna (Water flea) - 48 h	
EC50 other aquatic organisms 1	51.6 mg/l Daphnia magna (Water flea) - 48 h	
LC50 fish 2	121 mg/l Danio rerio (Zebra fish) - 96 h	
LC50 other aquatic organisms 2	500 mg/l No information available - 24 h	
ErC50 (algae)	500.00 mg/l 24 h	
NOEC (chronic)	122 mg/l Oryzias latipes (Japanese rice fish) - 10 d	
NOEC chronic fish	24 mg/l Oncorhynchus mykiss (Rainbow trout) - 96 h	
NOEC chronic algae	120 mg/l Daphnia magna (Water flea) - 11 d	
12.2. Persistence and degradability		
2% 2-ETHYL-1-INDANONE IN CHLOROFORM	N-D	
Persistence and degradability	Not established.	
CHLOROFORM-D (D, 99.8%) (865-49-6)		
Persistence and degradability	Not available.	
2-ETHYL-1-INDANONE UNLABELED (22351-	56-0)	
Persistence and degradability	Not available.	
12.3. Bioaccumulative potential		
•		
2% 2-ETHYL-1-INDANONE IN CHLOROFORM		
BCF fish 1	-0.11 mg/l Lepomis macrochirus (Bluegill) - 14 d	
Bioconcentration factor (BCF REACH)		
Log Pow  Bioaccumulative potential	1.97 Not established.	
•	NOT ESTABLISHED.	
CHLOROFORM-D (D, 99.8%) (865-49-6)		
BCF fish 1	-0.11 mg/l Lepomis macrochirus (Bluegill) - 14 d	
Bioconcentration factor (BCF REACH)	6	
Log Pow	1.97	
Bioaccumulative potential	No. 1944	
<u>'</u>	Not available.	
2-ETHYL-1-INDANONE UNLABELED (22351-		
<u>'</u>		
2-ETHYL-1-INDANONE UNLABELED (22351-	56-0)	
2-ETHYL-1-INDANONE UNLABELED (22351-Bioaccumulative potential  12.4. Mobility in soil	56-0)  Not available.	
2-ETHYL-1-INDANONE UNLABELED (22351-Bioaccumulative potential	56-0)  Not available.	
2-ETHYL-1-INDANONE UNLABELED (22351-Bioaccumulative potential  12.4. Mobility in soil  2% 2-ETHYL-1-INDANONE IN CHLOROFORM Ecology - soil	56-0) Not available.	
2-ETHYL-1-INDANONE UNLABELED (22351-Bioaccumulative potential  12.4. Mobility in soil  2% 2-ETHYL-1-INDANONE IN CHLOROFORM Ecology - soil  CHLOROFORM-D (D, 99.8%) (865-49-6)	Not available.  I-D  Not available.	
2-ETHYL-1-INDANONE UNLABELED (22351-Bioaccumulative potential  12.4. Mobility in soil  2% 2-ETHYL-1-INDANONE IN CHLOROFORM Ecology - soil  CHLOROFORM-D (D, 99.8%) (865-49-6)  Ecology - soil	Not available.  Not available.  Not available.  Not available.	
2-ETHYL-1-INDANONE UNLABELED (22351-Bioaccumulative potential  12.4. Mobility in soil  2% 2-ETHYL-1-INDANONE IN CHLOROFORM Ecology - soil  CHLOROFORM-D (D, 99.8%) (865-49-6) Ecology - soil  2-ETHYL-1-INDANONE UNLABELED (22351-	56-0)  Not available.  7-D  Not available.  Not available.  56-0)	
2-ETHYL-1-INDANONE UNLABELED (22351-Bioaccumulative potential  12.4. Mobility in soil  2% 2-ETHYL-1-INDANONE IN CHLOROFORM Ecology - soil  CHLOROFORM-D (D, 99.8%) (865-49-6)  Ecology - soil	Not available.  Not available.  Not available.  Not available.	
2-ETHYL-1-INDANONE UNLABELED (22351-Bioaccumulative potential  12.4. Mobility in soil  2% 2-ETHYL-1-INDANONE IN CHLOROFORM Ecology - soil  CHLOROFORM-D (D, 99.8%) (865-49-6) Ecology - soil  2-ETHYL-1-INDANONE UNLABELED (22351-	Not available.  Not available.  Not available.  Not available.  Not available.  S6-0)  Not available.	
2-ETHYL-1-INDANONE UNLABELED (22351-Bioaccumulative potential  12.4. Mobility in soil  2% 2-ETHYL-1-INDANONE IN CHLOROFORM Ecology - soil  CHLOROFORM-D (D, 99.8%) (865-49-6) Ecology - soil  2-ETHYL-1-INDANONE UNLABELED (22351-Ecology - soil	Not available.  Not available.  Not available.  Not available.  S6-0)  Not available.	
2-ETHYL-1-INDANONE UNLABELED (22351-Bioaccumulative potential  12.4. Mobility in soil  2% 2-ETHYL-1-INDANONE IN CHLOROFORM Ecology - soil  CHLOROFORM-D (D, 99.8%) (865-49-6) Ecology - soil  2-ETHYL-1-INDANONE UNLABELED (22351-Ecology - soil  12.5. Results of PBT and vPvB assessment	Not available.  Not available.  Not available.  Not available.  S6-0)  Not available.	
2-ETHYL-1-INDANONE UNLABELED (22351-Bioaccumulative potential  12.4. Mobility in soil  2% 2-ETHYL-1-INDANONE IN CHLOROFORM Ecology - soil  CHLOROFORM-D (D, 99.8%) (865-49-6) Ecology - soil  2-ETHYL-1-INDANONE UNLABELED (22351-Ecology - soil  12.5. Results of PBT and vPvB assessment of additional information available  12.6. Other adverse effects	Not available.  Not available.  Not available.  Not available.  Not available.  156-0)  Not available.  nt	
2-ETHYL-1-INDANONE UNLABELED (22351-Bioaccumulative potential  12.4. Mobility in soil  2% 2-ETHYL-1-INDANONE IN CHLOROFORM Ecology - soil  CHLOROFORM-D (D, 99.8%) (865-49-6) Ecology - soil  2-ETHYL-1-INDANONE UNLABELED (22351-Ecology - soil  12.5. Results of PBT and vPvB assessment No additional information available	Not available.  Not available.  Not available.  Not available.  S6-0)  Not available.	

# **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.

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

contents/container to Comply with applicable regulations.

Ecology - waste materials : Avoid release to the environment.

# **SECTION 14: Transport information**

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

**UN** number 14.1.

: 1888

UN-No.(DOT)

DOT NA no. UN1888

**UN** proper shipping name

**DOT Proper Shipping Name** 

: Chloroform

Department of Transportation (DOT) Hazard

: 6.1 - Class 6.1 - Poisonous materials 49 CFR 173.132

Classes

: 6.1 - Poison inhalation hazard



Packing group (DOT)

Hazard labels (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).

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

#### **Additional information** 14.3.

Other information : No supplementary information available.

**Overland transport** 

Packing group (ADR) : 111

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

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: E Tunnel restriction code Limited quantities (ADR) 5L EAC code : 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

: 60 L

DOT Quantity Limitations Passenger aircraft/rail

(49 CFR 173.27)

DOT Quantity Limitations Cargo aircraft only (49 : 220 L

CFR 175.75)

Civil Aeronautics Law : Toxic and infectious substances/Toxic substances(Hazardous materials notice Appended Table

1 Article 194 of the Enforcement Regulations)

14.4. **Environmental hazards** 

: No supplementary information available.

Other information

Special precautions for user 14.5.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code 14.6.

Not applicable

### **SECTION 15: Regulatory information**

#### 15.1. US Federal regulations

2% 2-ETHYL-1-INDANONE IN CHLOROFORM-D
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

# 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

#### 15.2. International regulations

# **CANADA**

# 2% 2-ETHYL-1-INDANONE IN CHLOROFORM-D

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

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

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

#### 15.2.1. **National regulations**

No additional information available

# 15.3. US State regulations

2% 2-ETHYL-1-INDANONE IN CHLOROFORM-D()	
U.S California - Proposition 65 - Carcinogens List	Yes
U.S California - Proposition 65 - Reproductive Toxicity - Female	Yes

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

2% 2-ETHYL-1-INDANONE IN CHLOROFORM-D()	
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%	<b>6) (865-49-6)</b>			
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.

# **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, labelling 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

unlabeled compound, unless specifically indicated otherwise. Health and safety data for labele 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 (Inhalation)	Acute toxicity (inhal.), Category 3
	, , ,
Acute Tox. 3 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Carc. 2	Carcinogenicity, Category 2
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Repr. 2	Reproductive toxicity, Category 2
Repr. 2	Reproductive toxicity, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT RE 1	Specific target organ toxicity — Repeated exposure, Category 1
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
H302	Harmful if swallowed
H315	Causes skin irritation
H319	Causes serious eye irritation
H331	Toxic 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
H372	Causes damage to organs through prolonged or repeated exposure
R22	Harmful if swallowed
R23	Toxic by inhalation
R36/38	Irritating to eyes and skin
R40	Limited evidence of a carcinogenic effect
R48/23	Toxic: danger of serious damage to health by prolonged exposure through inhalation
R52	Harmful to aquatic organisms
R62	Possible risk of impaired fertility
R63	Possible risk of harm to the unborn child
R67	Vapours may cause drowsiness and dizziness
Т	Toxic
Xi	Irritant
Xn	Harmful

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

NFPA health hazard : 3 - Short exposure could cause serious temporary or

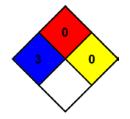
residual injury even though prompt medical attention was

given.

NFPA fire hazard : 0 - Materials that will not burn.

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 : 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

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