



# 1% CHLOROFORM IN ACETONE-D6

## 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: 01/07/2014

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Version: 3.0

DLM-76

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

### 1.1. Product identifier

Product form : Mixtures  
Product name : 1% CHLOROFORM IN ACETONE-D6  
Product code : DLM-76  
Other means of identification : Also applicable to:  
DLM-76B  
DLM-76C  
DLM-76F (3" FILL HEIGHT)  
DLM-76G (535 PP TUBE)  
DLM-76H (WILMAD WG-1364-2.5A-203M)

### 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](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  
Eye Irrit. 2 H319  
Carc. 2 H351  
STOT SE 3 H336  
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]

Carc.Cat.3; R40  
F; R11  
Xn; R48/20  
Xi; R36  
R67

Full text of R-phrases: see section 16

#### GHS-US classification

Flam. Liq. 2 H225  
Eye Irrit. 2 H319  
Carc. 2 H351  
STOT SE 3 H336  
STOT RE 2 H373

Full text of H statements : see section 16

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### Adverse physicochemical, human health and environmental effects

Skin. liver. kidneys. Highly flammable liquid and vapor. May cause drowsiness or dizziness. Causes serious eye irritation.

## 2.2. Label elements

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

Hazard pictograms (CLP)



Signal word (CLP)

: Danger

Hazardous ingredients

: CHLOROFORM UNLABELED; ACETONE-D6 (D, 99.9%)

Hazard statements (CLP)

: H225 - Highly flammable liquid and vapor  
H319 - Causes serious eye irritation  
H336 - May cause drowsiness or dizziness  
H351 - Suspected of causing cancer (if inhaled, if swallowed, in contact with skin)  
H373 - May cause damage to organs (central nervous system, liver, kidneys) through prolonged or repeated exposure (if inhaled, if swallowed, in contact with skin)

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, vapors  
P264 - Wash hands, forearms and face thoroughly after handling  
P271 - Use only outdoors or in a well-ventilated area  
P280 - Wear protective clothing, protective gloves

### GHS-US labeling

Hazard pictograms (GHS-US)



Signal word (GHS-US)

: Danger

Hazard statements (GHS-US)

: H225 - Highly flammable liquid and vapor  
H319 - Causes serious eye irritation  
H336 - May cause drowsiness or dizziness  
H351 - Suspected of causing cancer (Dermal, Inhalation, oral)  
H373 - May cause damage to organs (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  
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, fume, gas, mist, spray, vapors  
P261 - Avoid breathing dust, fume, gas, mist, spray, vapors  
P264 - Wash hands, forearms and face thoroughly after handling  
P271 - Use only outdoors or in a well-ventilated area  
P280 - Wear protective clothing, protective gloves  
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
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  
P337+P313 - If eye irritation persists: Get medical advice/attention  
P370+P378 - In case of fire: Use alcohol resistant foam, carbon dioxide (CO<sub>2</sub>), dry

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extinguishing powder to extinguish  
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 hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

| Name                  | Product identifier  | %    | Classification according to Directive 67/548/EEC   |
|-----------------------|---|------|--|
| ACETONE-D6 (D, 99.9%) | (CAS No) 666-52-4<br>(EC No) 211-563-9<br>(EC Index No) 606-001-00-8 (Unlabeled)<br>(REACH-no) 01-2119471330-49 | 98.3 | F; R11<br>Xi; R36<br>R67   |
| CHLOROFORM UNLABELED  | (CAS No) 67-66-3<br>(EC No) 212-742-4<br>(EC Index No) 602-006-00-4   | 1.7  | Carc.Cat.3; R40<br>T; R23<br>Xi; R36/38<br>Xn; R22<br>Repr.Cat.3; R62<br>Repr.Cat.3; R63<br>T; R48/23<br>R67 |

| Name                  | Product identifier  | %    | Classification according to Regulation (EC) No. 1272/2008 [CLP]   |
|-----------------------|---|------|---|
| ACETONE-D6 (D, 99.9%) | (CAS No) 666-52-4<br>(EC No) 211-563-9<br>(EC Index No) 606-001-00-8 (Unlabeled)<br>(REACH-no) 01-2119471330-49 | 98.3 | Flam. Liq. 2, H225<br>Eye Irrit. 2, H319<br>STOT SE 3, H336   |
| CHLOROFORM UNLABELED  | (CAS No) 67-66-3<br>(EC No) 212-742-4<br>(EC Index No) 602-006-00-4   | 1.7  | Acute Tox. 4 (Oral), H302<br>Acute Tox. 3 (Inhalation), H331<br>Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Carc. 2, H351<br>Repr. 2, H361<br>STOT SE 3, H336<br>STOT RE 1, H372 |

| Name                  | Product identifier | %    | GHS-US classification  |
|-----------------------|--------------------|------|--|
| ACETONE-D6 (D, 99.9%) | (CAS No) 666-52-4  | 98.3 | Flam. Liq. 2, H225<br>Eye Irrit. 2A, H319<br>STOT SE 3, H336   |
| CHLOROFORM UNLABELED  | (CAS No) 67-66-3   | 1.7  | Acute Tox. 4 (Oral), H302<br>Acute Tox. 3 (Inhalation), H331<br>Skin Irrit. 2, H315<br>Eye Irrit. 2A, H319<br>Carc. 2, H351<br>Repr. 2, H361<br>STOT SE 3, H336<br>STOT RE 1, H372 |

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 : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). Suspected of causing cancer (if inhaled, in contact with skin, if swallowed).
- First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
- First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Wash off with soap and plenty of water. Consult a physician. Get medical advice/attention.

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- |                                      |   |
|--------------------------------------|---|
| First-aid measures after eye contact | : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists. |
| First-aid measures after ingestion   | : Rinse mouth. Do NOT induce vomiting. Immediately call a poison center or doctor/physician.              |

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

- |                                      |  |
|--------------------------------------|--|
| Symptoms/injuries                    | : Causes damage to organs (kidneys, liver, central nervous system) (in contact with skin, if inhaled, if swallowed).               |
| Symptoms/injuries after inhalation   | : May cause respiratory irritation. May cause drowsiness or dizziness.   |
| Symptoms/injuries after skin contact | : May be harmful in contact with skin. May cause 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. May be fatal if swallowed and enters airways. |

### 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   | : Foam. Dry powder. Carbon dioxide. Water spray. Sand. |
| Unsuitable extinguishing media | : Do not use a heavy water stream.                     |

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

- |                  |   |
|------------------|---|
| Fire hazard      | : Highly flammable liquid and vapor.              |
| Explosion hazard | : May form flammable/explosive vapor-air mixture. |
| Reactivity       | : Highly flammable liquid and vapor.              |

### 5.3. Advice for firefighters

- |                                |   |
|--------------------------------|---|
| Firefighting instructions      | : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering 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

- |                  |   |
|------------------|---|
| General measures | : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking. |
|------------------|---|

#### 6.1.1. For non-emergency personnel

- |                      |   |
|----------------------|---|
| Emergency procedures | : Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid breathing dust, fume, gas, mist, spray, vapors. Avoid contact with skin and eyes. |
|----------------------|---|

#### 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". |
| Emergency procedures | : Ventilate area.   |

### 6.2. Environmental precautions

Do not allow to enter drains or water courses. Avoid release to the environment.

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

- |                         |  |
|-------------------------|--|
| Methods for cleaning up | : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters. This material and its container must be disposed of in a safe way, and as per local legislation. |
| 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 | : Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Flammable vapors may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing dust, fume, gas, mist, spray, vapors. Avoid contact with skin and eyes. |
| Hygiene measures              | : Wash hands before eating and wash before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.   |

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### 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 Proper grounding procedures to avoid static electricity should be followed equipment. |
| Storage conditions     | : Store at room temperature away from light and moisture.  |
| Incompatible products  | : Strong bases. Strong acids.  |
| Incompatible materials | : Sources of ignition. Direct sunlight. Heat sources.  |

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

| CHLOROFORM UNLABELED (67-66-3)   |   |  |
|----------------------------------|---|--|
| Italy - Portugal - USA ACGIH     | ACGIH TWA (ppm)                         | 10.00000000 ppm Basis: USA. ACGIH Threshold Limit Values (TLV)   |
| Italy - Portugal - USA ACGIH     | Remark (ACGIH)                          | Central Nervous system impairment. Liver damage. Embryo/fetal damage. Confirmed animal carcinogen with unknown relevance to humans.  |
| USA NIOSH                        | NIOSH REL (STEL) (mg/m <sup>3</sup> )   | 9.78 mg/m <sup>3</sup> Basis: USA. NIOSH Recommended Exposure Limits   |
| USA NIOSH                        | NIOSH REL (STEL) (ppm)                  | 2 ppm Basis: USA. NIOSH Recommended Exposure Limits  |
| USA NIOSH                        | Remark (NIOSH)                          | Potential Occupational Carcinogen. See Appendix A.   |
| USA OSHA                         | OSHA PEL (TWA) (mg/m <sup>3</sup> )     | 9.78 mg/m <sup>3</sup> Basis: USA. Occupational Exposure Limits (OSHA) Table Z-1 Limits for Air Contaminants - 1910.1000   |
| USA OSHA                         | OSHA PEL (TWA) (ppm)                    | 2 ppm Basis: USA. Occupational Exposure Limits (OSHA) Table Z-1 Limits for Air Contaminants - 1910.1000  |
| USA OSHA                         | OSHA PEL (Ceiling) (mg/m <sup>3</sup> ) | 240 mg/m <sup>3</sup> Basis: USA. Occupational Exposure Limits (OSHA) Table Z-1 Limits for Air Contaminants.   |
| USA OSHA                         | OSHA PEL (Ceiling) (ppm)                | 50 ppm Basis: USA. Occupational Exposure Limits (OSHA) Table Z-1 Limits for Air Contaminants.  |
| USA OSHA                         | Remark (OSHA)                           | The value in mg/m <sup>3</sup> is approximate. Ceiling limit is to be determined from breathing-zone air samples. Value: PEL Control Parameters: 2 ppm / 9.78 mg/m <sup>3</sup> Basis: California permissible exposure limits for chemical contaminants (Title 8, Article 107)   |
| ACETONE-D6 (D, 99.9%) (666-52-4) |   |  |
| Italy - Portugal - USA ACGIH     | ACGIH TWA (ppm)                         | 500.00000000 ppm Remarks: Central Nervous System impairment. Hematologic effects. Upper Respiratory Tract irritation. Eye irritation. Adopted values or notations enclosed are those for which changes are proposed in the NIC. See Notice of Intended Changes (NIC). Substances for which there is a Biological Exposure Index or Indices (see BEI section). Not classifiable as a human carcinogen. Basis: USA. ACGIH Threshold Limit Values (TLV) |
| Italy - Portugal - USA ACGIH     | ACGIH STEL (ppm)                        | 750 ppm Remarks: Central Nervous System impairment. Hematologic effects. Upper Respiratory Tract irritation. Eye irritation. Adopted values or notations enclosed are those for which changes are proposed in the NIC. See Notice of Intended Changes (NIC). Substances for which there is a Biological Exposure Index or Indices (see BEI section). Not classifiable as a human carcinogen. Basis: USA. ACGIH Threshold Limit Values (TLV)          |

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| ACETONE-D6 (D, 99.9%) (666-52-4) |   |  |
|----------------------------------|---|--|
| Italy - Portugal - USA ACGIH     | Remark (ACGIH)                          | Component: Acetone CAS-No.: 67-64-1 Value: TWA Control parameter: 250 ppm Remarks: Central Nervous System impairment. Upper Respiratory Tract irritation. Eye irritation. 2015 Adoption. Substances for which there is a Biological Exposure Index or Indices (see BEI section). Not classifiable as a human carcinogen. Basis: USA. ACGIH Threshold Limit Values (TLV); Component: Acetone CAS-No.: 67-64-1 Parameters: Acetone Value: 50.0000 mg/l Biological specimen: Urine Remarks: End of shift (As soon as possible after exposure ceases) Basis: ACGIH - Biological Exposure Indices (BEI); Component: Acetone CAS-No.: 67-64-1 Parameters: Acetone Value: 25 mg/l Biological specimen: Urine Remarks: End of shift (As soon as possible after exposure ceases) Basis: ACGIH - Biological Exposure Indices (BEI) |
| USA NIOSH                        | NIOSH REL (TWA) (mg/m <sup>3</sup> )    | 590 mg/m <sup>3</sup> Basis: USA. NIOSH Recommended Exposure Limits  |
| USA NIOSH                        | NIOSH REL (TWA) (ppm)                   | 250 ppm Basis: USA. NIOSH Recommended Exposure Limits  |
| USA OSHA                         | OSHA PEL (TWA) (mg/m <sup>3</sup> )     | 2400 mg/m <sup>3</sup> The value in mg/m <sup>3</sup> is approximate. Basis: USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants  |
| USA OSHA                         | OSHA PEL (TWA) (ppm)                    | 1000 ppm Basis: USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants   |
| USA OSHA                         | OSHA PEL (STEL) (mg/m <sup>3</sup> )    | 1780 mg/m <sup>3</sup> Basis: California permissible exposure limits for chemical contaminants. (Title 8, Article 107)   |
| USA OSHA                         | OSHA PEL (STEL) (ppm)                   | 750 ppm Basis: California permissible exposure limits for chemical contaminants. (Title 8, Article 107)  |
| USA OSHA                         | OSHA PEL (Ceiling) (mg/m <sup>3</sup> ) | 1200 mg/m <sup>3</sup> Basis: California permissible exposure limits for chemical contaminants. (Title 8, Article 107)   |
| USA OSHA                         | OSHA PEL (Ceiling) (ppm)                | 3000 ppm Basis: California permissible exposure limits for chemical contaminants. (Title 8, Article 107)   |
| USA OSHA                         | Remark (OSHA)                           | Component: Acetone CAS-No.: 67-64-1 Parameters: Acetone Value: 500 ppm Basis: California permissible exposure limits for chemical contaminants. (Title 8, Article 107)   |

### 8.2. Exposure controls

Appropriate engineering controls

: Handle in accordance with good industrial hygiene and safety procedures.

Personal protective equipment

: Avoid all unnecessary exposure. Gloves. Protective clothing. Respiratory protection of the dependent type. Safety glasses.



Materials for protective clothing

: Wear suitable protective clothing and gloves.

Hand protection

: Wear suitable protective clothing and gloves.

Eye protection

: Safety glasses. Wear suitable protective clothing and gloves.

Skin and body protection

: Wear suitable protective clothing.

Respiratory protection

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

Environmental exposure controls

: Do not exceed the occupational exposure limits (OEL). Avoid release to the environment.

Other information

: Do not eat, drink or smoke during use.

## 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

: 64.12 g/mol (Labeled)

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|   |  |
|---|--|
| Color                                       | : Colorless.                           |
| Odor  | : characteristic.                      |
| Odor threshold                              | : No data available                    |
| pH  | : No data available                    |
| Relative evaporation rate (butyl acetate=1) | : No data available                    |
| Melting point                               | : -94 °C                               |
| Freezing point                              | : No data available                    |
| Boiling point                               | : 56 °C at 1,013 hPa (760 mmHg)        |
| Flash point                                 | : -17 °C closed cup                    |
| Auto-ignition temperature                   | : 465 °C                               |
| Decomposition temperature                   | : No data available                    |
| Flammability (solid, gas)                   | : Highly flammable liquid and vapor    |
| Vapor pressure                              | : 533.3 hPa at 39.5 °C                 |
| Relative vapor density at 20 °C             | : No data available                    |
| Relative density                            | : No data available                    |
| Solubility                                  | : Completely miscible.                 |
| Log Pow                                     | : -0.24                                |
| 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                            | : 2 - 13 vol %<br>≥ 0 g/m <sup>3</sup> |

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Highly flammable liquid and vapor.

### 10.2. Chemical stability

Stable if stored under recommended conditions.

### 10.3. Possibility of hazardous reactions

May form flammable/explosive vapor-air mixture.

### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame.

### 10.5. Incompatible materials

Strong acids. Strong bases.

### 10.6. Hazardous decomposition products

fume. Carbon oxides (CO, CO<sub>2</sub>). May release flammable gases.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

| 1% CHLOROFORM IN ACETONE-D6    |   |
|--------------------------------|---|
| LD50 oral rat                  | 5800 mg/kg Remarks: Behavioral: Altered sleep time (including change in righting reflex). Behavioral: Tremor. Behavioral: Headache. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. |
| LD50 dermal                    | 7426 mg/kg Guinea pig   |
| LC50 inhalation rat (mg/l)     | 50100 mg/m <sup>3</sup> - 8 h Remarks: Drowsiness, Dizziness, Unconsciousness   |
| ATE CLP (oral)                 | 5800.000 mg/kg body weight  |
| ATE CLP (vapors)               | 50.100 mg/l/4h  |
| ATE CLP (dust, mist)           | 50.100 mg/l/4h  |
| CHLOROFORM UNLABELED (67-66-3) |   |
| LD50 oral rat                  | 908 mg/kg Remarks: Behavioral: Change in motor activity (specific assay). Behavioral: Ataxia. Lungs, Thorax, or Respiration: Respiratory stimulation.   |
| LD50 dermal rabbit             | > 20000 mg/kg   |



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| CHLOROFORM UNLABELED (67-66-3) |                           |
|--------------------------------|---------------------------|
| ATE CLP (oral)                 | 908.000 mg/kg body weight |
| ATE CLP (gases)                | 700.000 ppmV/4h           |
| ATE CLP (vapors)               | 3.000 mg/l/4h             |
| ATE CLP (dust, mist)           | 0.500 mg/l/4h             |

| ACETONE-D6 (D, 99.9%) (666-52-4) |   |
|----------------------------------|---|
| LD50 oral rat                    | 5800 mg/kg Remarks: Behavioral: Altered sleep time (including change in righting reflex). Behavioral: Tremor. Behavioral: Headache. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. |
| LD50 dermal                      | 7426 mg/kg Guinea pig   |
| LC50 inhalation rat (mg/l)       | 50100 mg/m <sup>3</sup> - 8 h Remarks: Drowsiness, Dizziness, Unconsciousness   |
| ATE CLP (oral)                   | 5800.000 mg/kg body weight  |
| ATE CLP (vapors)                 | 50.100 mg/l/4h  |
| ATE CLP (dust, mist)             | 50.100 mg/l/4h  |

|                                   |  |
|-----------------------------------|--|
| Skin corrosion/irritation         | : Not classified   |
| Serious eye damage/irritation     | : Causes serious eye irritation.   |
| Respiratory or skin sensitization | : Not classified<br>LD50/dermal/Guinea-pig<br>Does not cause cutaneous sensitization for guinea-pigs |
| Germ cell mutagenicity            | : Not classified   |
| Carcinogenicity                   | : Suspected of causing cancer (if inhaled, if swallowed, in contact with skin).                      |

| CHLOROFORM UNLABELED (67-66-3) |  |
|--------------------------------|--|
| Carcinogenicity, oral, rat     | Tumorigenic: Carcinogenic by RTECS criteria. Leukemia. |

|   |  |
|---|--|
| Reproductive toxicity                               | : Not classified   |
| Specific target organ toxicity – single exposure    | : May cause drowsiness or dizziness  |
| Specific target organ toxicity – repeated exposure  | : May cause damage to organs (central nervous system, liver, kidneys) through prolonged or repeated exposure (if inhaled, if swallowed, in contact with skin).<br>No data available  |
| 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. Damage to kidneys. |
| Symptoms/injuries after inhalation                  | : May cause respiratory irritation. May cause drowsiness or dizziness.   |
| Symptoms/injuries after skin contact                | : May be harmful in contact with skin. May cause 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. May be fatal if swallowed and enters airways.   |

## 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. |
|-------------------|--|

| 1% CHLOROFORM IN ACETONE-D6 |  |
|-----------------------------|--|
| LC50 fish 1                 | 5540 mg/l Oncorhynchus mykiss (rainbow trout) - 96 h |
| EC50 Daphnia 1              | 8800 mg/l Daphnia magna (Water flea) - 48 h          |
| ErC50 (algae)               | Remarks: No data available                           |

| CHLOROFORM UNLABELED (67-66-3) |   |
|--------------------------------|---|
| LC50 fish 1                    | 162 mg/l Leuciscus idus (Golden orfe) - 48 h                      |
| LC50 other aquatic organisms 1 | 97 mg/l Other fish - 96 h   |
| EC50 Daphnia 1                 | 79 mg/l Daphnia magna (Water flea) - 24 h                         |
| EC50 other aquatic organisms 1 | 51.6 mg/l Immobilization EC50 - Daphnia magna (Water flea) - 48 h |
| LC50 fish 2                    | 121 mg/l Danio rerio (Zebra fish) - 96 h                          |
| ErC50 (algae)                  | 500 mg/l 24 h   |
| LOEC (acute)                   | Inhalation - Rat - male - 500 ppm - 6 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                        |



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| ACETONE-D6 (D, 99.9%) (666-52-4) |  |
|----------------------------------|--|
| LC50 fish 1                      | 5540 mg/l Oncorhynchus mykiss (rainbow trout) - 96 h |
| EC50 Daphnia 1                   | 8800 mg/l Daphnia magna (Water flea) - 48 h          |
| ErC50 (algae)                    | Remarks: No data available                           |

### 12.2. Persistence and degradability

| 1% CHLOROFORM IN ACETONE-D6 |  |
|-----------------------------|--|
| Biodegradation              | 91 % - Readily biodegradable. (OECD Test Guideline 301B) |

| CHLOROFORM UNLABELED (67-66-3) |                |
|--------------------------------|----------------|
| Persistence and degradability  | Not available. |

| ACETONE-D6 (D, 99.9%) (666-52-4) |  |
|----------------------------------|--|
| Biodegradation                   | 91 % - Readily biodegradable. (OECD Test Guideline 301B) |

### 12.3. Bioaccumulative potential

| 1% CHLOROFORM IN ACETONE-D6 |                              |
|-----------------------------|------------------------------|
| Log Pow                     | -0.24                        |
| Bioaccumulative potential   | There is no bioaccumulation. |

| CHLOROFORM UNLABELED (67-66-3)      |  |
|-------------------------------------|--|
| BCF fish 1                          | -0.11 mg/l Lepomis macrochirus (Bluegill) - 14 d |
| Bioconcentration factor (BCF REACH) | 6  |
| Log Pow                             | 1.97   |
| Bioaccumulative potential           | Not available.                                   |

| ACETONE-D6 (D, 99.9%) (666-52-4) |                              |
|----------------------------------|------------------------------|
| Log Pow                          | -0.24                        |
| Bioaccumulative potential        | There is no bioaccumulation. |

### 12.4. Mobility in soil

| CHLOROFORM UNLABELED (67-66-3) |                |
|--------------------------------|----------------|
| Ecology - soil                 | Not available. |

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 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.                                 |
| 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. |
| Additional information                      | : Handle empty containers with care because residual vapors are flammable.   |
| 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) | : 1090 |
| DOT NA no.  | UN1090 |

### 14.2. UN proper shipping name

|                            |   |
|----------------------------|---|
| Proper Shipping Name (DOT) | : Acetone   |
| Class (DOT)                | : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120 |
| Hazard labels (DOT)        | : 3 - Flammable liquid  |



|                     |                      |
|---------------------|----------------------|
| Packing group (DOT) | : II - Medium Danger |
|---------------------|----------------------|

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|   |   |  |
|---|---|--|
| 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.<br>T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3)<br>TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling. |
| DOT Packaging Exceptions (49 CFR 173.xxx) | : | 150  |
| DOT Packaging Non Bulk (49 CFR 173.xxx)   | : | 202  |
| DOT Packaging Bulk (49 CFR 173.xxx)       | : | 242  |

### 14.3. Additional information

|                                       |   |   |
|---------------------------------------|---|---|
| Emergency Response Guide (ERG) Number | : | 127                                     |
| Other information                     | : | No supplementary information available. |

#### Overland transport

|   |   |                       |
|---|---|-----------------------|
| Packing group (ADR)                       | : | II                    |
| Class (ADR)                               | : | 3 - Flammable liquid  |
| Hazard identification number (Kemler No.) | : | 33                    |
| Classification code (ADR)                 | : | F1                    |
| Hazard labels (ADR)                       | : | 3 - Flammable liquids |



|               |   |  |
|---------------|---|--|
| Orange plates | : |  |
|---------------|---|--|

|                               |   |     |
|-------------------------------|---|-----|
| Tunnel restriction code (ADR) | : | D/E |
| Limited quantities (ADR)      | : | 11  |
| Excepted quantities (ADR)     | : | E2  |

#### Transport by sea

|                             |   |   |
|-----------------------------|---|---|
| DOT Vessel Stowage Location | : | B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded. |
| MFAG-No                     | : | 127   |

#### Air transport

|  |   |                   |
|--|---|-------------------|
| DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) | : | 5 L               |
| DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)     | : | 60 L              |
| Civil Aeronautics Law  | : | Flammable liquids |

### 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% CHLOROFORM IN ACETONE-D6

Subject to reporting requirements of United States SARA Section 313

# 1% CHLOROFORM IN ACETONE-D6

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| 1% CHLOROFORM IN ACETONE-D6                        |   |
|--|---|
| 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                | Fire hazard<br>Immediate (acute) health hazard<br>Delayed (chronic) health hazard |

| CHLOROFORM UNLABELED (67-66-3)  |  |
|---|--|
| Listed on the United States SARA Section 302<br>Subject to reporting requirements of United States SARA Section 313 |  |
| SARA Section 311/312 Hazard Classes   | Immediate (acute) health hazard<br>Delayed (chronic) health hazard |

| ACETONE-D6 (D, 99.9%) (666-52-4)                   |   |
|--|---|
| 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                | Fire hazard<br>Immediate (acute) health hazard<br>Delayed (chronic) health hazard |
| SARA Section 313 - Emission Reporting              | Not subject to reporting requirements of the United States SARA Section 313.      |

### 15.2. International regulations

#### CANADA

| 1% CHLOROFORM IN ACETONE-D6                           |  |
|---|--|
| Listed on the Canadian DSL (Domestic Substances List) |  |
| CHLOROFORM UNLABELED (67-66-3)                        |  |
| Listed on the Canadian DSL (Domestic Substances List) |  |

#### 15.2.1. National regulations

No additional information available

### 15.3. US State regulations

| 1% CHLOROFORM IN ACETONE-D6()                                       |   |
|---|---|
| U.S. - California - Proposition 65 - Carcinogens List               | Yes   |
| U.S. - California - Proposition 65 - Developmental Toxicity         | Yes   |
| 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<br>U.S. - Pennsylvania - RTK (Right to Know) List<br>U.S. - New Jersey - Right to Know Hazardous Substance List |

| CHLOROFORM UNLABELED (67-66-3)                        |   |   |   |                                  |
|---|---|---|---|----------------------------------|
| 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   | Yes   | No  | No  |                                  |

| ACETONE-D6 (D, 99.9%) (666-52-4)                      |   |   |   |                                  |
|---|---|---|---|----------------------------------|
| 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) |
| No  | No  | No  | No  |                                  |

| CHLOROFORM UNLABELED (67-66-3)  |  |
|---|--|
| State or local regulations  |  |
| U.S. - Massachusetts - Right To Know List<br>U.S. - Pennsylvania - RTK (Right to Know) List<br>U.S. - New Jersey - Right to Know Hazardous Substance List |  |

| ACETONE-D6 (D, 99.9%) (666-52-4)  |  |
|---|--|
| State or local regulations  |  |
| U.S. - Massachusetts - Right To Know List<br>U.S. - Pennsylvania - RTK (Right to Know) List |  |

# 1% CHLOROFORM IN ACETONE-D6

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### ACETONE-D6 (D, 99.9%) (666-52-4)

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.

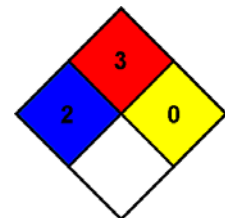
Full text of R-, H- and EUH-phrases:

|                           |  |
|---------------------------|--|
| Acute Tox. 3 (Inhalation) | Acute toxicity (inhalation) 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   |
| Flam. Liq. 2              | Flammable liquids 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 RE 2                 | Specific target organ toxicity (repeated exposure) Category 2                        |
| STOT SE 3                 | Specific target organ toxicity (single exposure) Category 3                          |
| H225                      | Highly flammable liquid and vapor  |
| 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                                  |
| H372                      | Causes damage to organs through prolonged or repeated exposure                       |
| H373                      | May cause damage to organs through prolonged or repeated exposure                    |
| R11                       | Highly flammable   |
| R22                       | Harmful if swallowed   |
| R23                       | Toxic by inhalation  |
| R36                       | Irritating to eyes   |
| R36/38                    | Irritating to eyes and skin  |
| R40                       | Limited evidence of a carcinogenic effect  |
| R48/20                    | Harmful: danger of serious damage to health by prolonged exposure through inhalation |
| R48/23                    | Toxic: danger of serious damage to health by prolonged exposure through inhalation   |
| R62                       | Possible risk of impaired fertility  |
| R63                       | Possible risk of harm to the unborn child  |
| R67                       | Vapors may cause drowsiness and dizziness  |
| F                         | Highly flammable   |
| 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 : 3 - Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions.

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



### 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*