



ACETONE-D6 (D, 99.9%) +0.05% V/V TMS

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Issue date: 6/2/2011 Revision date: 6/7/2023 Supersedes: 6/24/2015 Version: 4.2

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : ACETONE-D6 (D, 99.9%) +0.05% V/V TMS
CAS-No. : 67-64-1
Product code : DLM-9TB
Formula : C₃H₆O

1.2. Recommended use and restrictions on use

No additional information available

1.3. Supplier

Cambridge Isotope Laboratories, Inc.
50 Frontage Rd
01810
ANDOVER, MA, 01810
USA
T 1-800-322-1174
cilsales@isotope.com - www.isotope.com

1.4. Emergency telephone number

Emergency number : 1-703-741-5970
Chemtrec 1-800-424-9300 24 hours

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture



GHS US classification

Flammable liquids Category 1	H224	Extremely flammable liquid and vapor
Flammable liquids Category 2	H225	Highly flammable liquid and vapor
Serious eye damage/eye irritation Category 2A	H319	Causes serious eye irritation
Specific target organ toxicity – Single exposure, Category 3, Narcosis	H336	May cause drowsiness or dizziness

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :  

Signal word (GHS US) : Danger

Hazard statements (GHS US) : H224 - Extremely flammable liquid and vapor
H225 - Highly flammable liquid and vapor
H319 - Causes serious eye irritation
H336 - May cause drowsiness or dizziness

Precautionary statements (GHS US) : 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.

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P241 - Use explosion-proof electrical, lighting, ventilating equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P261 - Avoid breathing dust, fume, gas, mist, spray, vapors.
P264 - Wash Both hands 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.
P312 - Call a poison center or doctor 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, Dry powder, Water spray 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 Comply with applicable regulations.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
ACETONE-D6 (D, 99.9%)	CAS-No.: 67-64-1	99.963	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336
TETRAMETHYLSILANE 99.9%	CAS-No.: 75-76-3	0.037	Flam. Liq. 1, H224

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

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : 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.
First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing.
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 : Call a poison center/doctor/physician if you feel unwell.

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4.2. Most important symptoms and effects (acute and delayed)

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/effects	: May cause drowsiness or dizziness.
Symptoms/effects after inhalation	: May be harmful if inhaled. May cause drowsiness or dizziness. May cause irritation or asthma-like symptoms.
Symptoms/effects after skin contact	: May be harmful in contact with skin. May cause moderate irritation.
Symptoms/effects after eye contact	: Causes serious eye irritation.
Symptoms/effects after ingestion	: May be harmful if swallowed.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

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

5.2. Specific hazards arising from the chemical

Fire hazard : Extremely flammable liquid and vapor.
Hazardous decomposition products in case of fire : Carbon oxides (CO, CO₂).

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
Other information : Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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".

6.2. Environmental precautions

Prevent entry to sewers and public waters. Do not allow to enter drains or water courses. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Clean up any spills as soon as possible, using an absorbent material to collect it. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. For large spills, confine the spill in a dike and charge it with wet sand or earth for subsequent safe disposal.
Methods for cleaning up : 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.

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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.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Ground/bond container and receiving equipment. Store locked up. Store in tightly closed, leak-proof containers. Keep dry. Store in a well-ventilated place. Keep container tightly closed.
Storage conditions	: Store at room temperature away from light and moisture.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

ACETONE-D6 (D, 99.9%) +0.05% V/V TMS (67-64-1)

USA - ACGIH - Occupational Exposure Limits

Local name	Acetone
ACGIH OEL TWA [ppm]	500 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)
ACGIH OEL 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)
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)
Regulatory reference	ACGIH 2022

USA - ACGIH - Biological Exposure Indices

Local name	ACETONE
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ACETONE-D6 (D, 99.9%) +0.05% V/V TMS (67-64-1)	
BEI	25 mg/l Parameter: Acetone - Medium: urine - Sampling time: End of shift - Notations: Ns
Remark	Component: Acetone CAS-NO.: 67-64-1 Parameters: Acetone Value: 50.0000 mg/l Biological specimen: Urine Basis: ACGIH - Biological Exposure Indices (BEI) Remarks: End of shift (As soon as possible after exposure ceases).; Component: Acetone CAS-NO.: 67-64-1 Parameters: Acetone Value: 25 mg/l Biological specimen: Urine Basis: ACGIH - Biological Exposure Indices (BEI) Remarks: End of shift (As soon as possible after exposure ceases).
Regulatory reference	ACGIH 2022
USA - OSHA - Occupational Exposure Limits	
OSHA PEL TWA [1]	2400 mg/m ³ The value in mg/m ³ is approximate. Basis: USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
OSHA PEL TWA [2]	1000 ppm Basis: USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
OSHA PEL STEL [1]	1780 mg/m ³ Basis: California permissible exposure limits for chemical contaminants. (Title 8, Article 107)
OSHA PEL STEL [2]	750 ppm Basis: California permissible exposure limits for chemical contaminants. (Title 8, Article 107)
OSHA PEL C	1200 mg/m ³ Basis: California permissible exposure limits for chemical contaminants. (Title 8, Article 107)
OSHA PEL C [ppm]	3000 ppm Basis: California permissible exposure limits for chemical contaminants. (Title 8, Article 107)
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)
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL TWA	590 mg/m ³ Basis: USA. NIOSH Recommended Exposure Limits
NIOSH REL TWA [ppm]	250 ppm Basis: USA. NIOSH Recommended Exposure Limits
ACETONE-D6 (D, 99.9%) (67-64-1)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Acetone
ACGIH OEL TWA [ppm]	500 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)
ACGIH OEL 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%) (67-64-1)	
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)
Regulatory reference	ACGIH 2022
USA - ACGIH - Biological Exposure Indices	
Local name	ACETONE
BEI	25 mg/l Parameter: Acetone - Medium: urine - Sampling time: End of shift - Notations: Ns
Remark	Component: Acetone CAS-NO.: 67-64-1 Parameters: Acetone Value: 50.0000 mg/l Biological specimen: Urine Basis: ACGIH - Biological Exposure Indices (BEI) Remarks: End of shift (As soon as possible after exposure ceases).; Component: Acetone CAS-NO.: 67-64-1 Parameters: Acetone Value: 25 mg/l Biological specimen: Urine Basis: ACGIH - Biological Exposure Indices (BEI) Remarks: End of shift (As soon as possible after exposure ceases).
Regulatory reference	ACGIH 2022
USA - OSHA - Occupational Exposure Limits	
OSHA PEL TWA [1]	2400 mg/m ³ The value in mg/m ³ is approximate. Basis: USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
OSHA PEL TWA [2]	1000 ppm Basis: USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
OSHA PEL STEL [1]	1780 mg/m ³ Basis: California permissible exposure limits for chemical contaminants. (Title 8, Article 107)
OSHA PEL STEL [2]	750 ppm Basis: California permissible exposure limits for chemical contaminants. (Title 8, Article 107)
OSHA PEL C	1200 mg/m ³ Basis: California permissible exposure limits for chemical contaminants. (Title 8, Article 107)
OSHA PEL C [ppm]	3000 ppm Basis: California permissible exposure limits for chemical contaminants. (Title 8, Article 107)
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)
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL TWA	590 mg/m ³ Basis: USA. NIOSH Recommended Exposure Limits
NIOSH REL TWA [ppm]	250 ppm Basis: USA. NIOSH Recommended Exposure Limits
TETRAMETHYLSILANE 99.9% (75-76-3)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH chemical category	No component of this product present at levels greater than or equal to 0.1% is identifiable as a carcinogen or potential carcinogen by ACGIH.

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8.2. Appropriate engineering controls

- Appropriate engineering controls : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
- Environmental exposure controls : Do not exceed the occupational exposure limits (OEL). Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

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 safety glasses with side shields (or goggles) and a face shield.
Skin and body protection:
Wear suitable protective clothing, gloves and eye/face protection
Respiratory protection:
Wear respiratory protection. Approved supplied air respirator

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid, clear.
Color	: Colorless
Odor	: Mixture contains one or more component(s) which have the following odour:
Odor threshold	: No data available
pH	: 5 Source: ECHA
Melting point	: -95 °C Source: ICSC
Freezing point	: No data available
Boiling point	: 56.1 °C at 760 mmHg Source: HSDB
Flash point	: -18 °C Source: ICSC
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: 240 hPa at 20°C Source: ECHA
Relative vapor density at 20°C	: No data available
Relative density	: 0.79 Source: ICSC
Density	: 0.791 g/ml at 25 °C (77 °F)
Molecular mass	: 58.08 g/mol Source: pubchem
Solubility	: Water: 1000000 mg/l
Partition coefficient n-octanol/water (Log Pow)	: -0.24 Source: ICSC
Auto-ignition temperature	: 465 °C Source: ICSC

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Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: 2 – 13 % (V) Upper explosion limit: 2.2 – 13 % Source: ICSC
Explosive properties	: No data available
Oxidizing properties	: 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

May form flammable/explosive vapor-air mixture.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

Bases. Oxidizing agent. Reducing agents. Reacts violently with. Phosphorus oxychloride.

10.6. Hazardous decomposition products

Carbon oxides (CO, CO₂).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

ACETONE-D6 (D, 99.9%) +0.05% V/V TMS (67-64-1)

LD50 oral rat	5800 mg/kg Source: ECHA
LD50 dermal rabbit	> 7400 mg/kg Source: ECHA
LC50 Inhalation - Rat	50100 mg/m ³ - 8 h Remarks: Drowsiness, Dizziness, Unconsciousness
ATE US (oral)	5800 mg/kg body weight
ATE US (vapors)	50.1 mg/l/4h
ATE US (dust, mist)	50.1 mg/l/4h

ACETONE-D6 (D, 99.9%) (67-64-1)

LD50 oral rat	5800 mg/kg Source: ECHA
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ACETONE-D6 (D, 99.9%) +0.05% V/V TMS

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ACETONE-D6 (D, 99.9%) (67-64-1)	
LD50 dermal rabbit	> 7400 mg/kg Source: ECHA
LD50 dermal	7426 mg/kg Guinea pig
LC50 Inhalation - Rat	50100 mg/m ³ - 8 h Remarks: Drowsiness, Dizziness, Unconsciousness
LC50 Inhalation - Rat (Vapours)	76 mg/l Source: ECHA
ATE US (oral)	5800 mg/kg body weight
ATE US (vapors)	50.1 mg/l/4h
ATE US (dust, mist)	50.1 mg/l/4h

TETRAMETHYLSILANE 99.9% (75-76-3)	
LD50 oral rat	> 2000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rat	> 2000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: other:
LC50 Inhalation - Rat	> 21.3 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity), Guideline: other:

Skin corrosion/irritation : Not classified
pH: 5 Source: ECHA

ACETONE-D6 (D, 99.9%) (67-64-1)	
pH	5 Source: ECHA

Serious eye damage/irritation : Causes serious eye irritation.
pH: 5 Source: ECHA

ACETONE-D6 (D, 99.9%) (67-64-1)	
pH	5 Source: ECHA

Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : May cause drowsiness or dizziness.

ACETONE-D6 (D, 99.9%) (67-64-1)	
STOT-single exposure	May cause drowsiness or dizziness.

STOT-repeated exposure : Not classified
Aspiration hazard : Not classified
Viscosity, kinematic : No data available
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/effects : May cause drowsiness or dizziness.
Symptoms/effects after inhalation : May be harmful if inhaled. May cause drowsiness or dizziness. May cause irritation or asthma-like symptoms.
Symptoms/effects after skin contact : May be harmful in contact with skin. May cause moderate irritation.
Symptoms/effects after eye contact : Causes serious eye irritation.
Symptoms/effects after ingestion : May be harmful if swallowed.

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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.

ACETONE-D6 (D, 99.9%) +0.05% V/V TMS (67-64-1)	
LC50 - Fish [1]	5540 mg/l Source: ECHA
EC50 - Crustacea [1]	8800 mg/l Daphnia magna (Water flea) - 48 h
ErC50 algae	Remarks: No data available

ACETONE-D6 (D, 99.9%) (67-64-1)	
LC50 - Fish [1]	5540 mg/l Source: ECHA
EC50 - Crustacea [1]	8800 mg/l Daphnia magna (Water flea) - 48 h
ErC50 algae	Remarks: No data available

TETRAMETHYLSILANE 99.9% (75-76-3)	
LC50 - Fish [1]	1.9 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	> 103 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 0.0079 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)

12.2. Persistence and degradability

ACETONE-D6 (D, 99.9%) +0.05% V/V TMS (67-64-1)	
Biodegradation	91 % - Readily biodegradable. (OECD Test Guideline 301B)

ACETONE-D6 (D, 99.9%) (67-64-1)	
Not rapidly degradable	
Biodegradation	91 % - Readily biodegradable. (OECD Test Guideline 301B)

TETRAMETHYLSILANE 99.9% (75-76-3)	
Not rapidly degradable	

12.3. Bioaccumulative potential

ACETONE-D6 (D, 99.9%) +0.05% V/V TMS (67-64-1)	
Partition coefficient n-octanol/water (Log Pow)	-0.24 Source: ICSC
Bioaccumulative potential	There is no bioaccumulation.

ACETONE-D6 (D, 99.9%) (67-64-1)	
Partition coefficient n-octanol/water (Log Pow)	-0.24 Source: ICSC
Bioaccumulative potential	There is no bioaccumulation.

TETRAMETHYLSILANE 99.9% (75-76-3)	
Partition coefficient n-octanol/water (Log Pow)	3.24 Source: ChemIDplus

12.4. Mobility in soil

No additional information available

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12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal 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 DOT / TDG / IMDG / IATA

14.1. UN number

DOT NA No	:	UN1090
UN-No. (TDG)	:	UN1090
UN-No. (IMDG)	:	1090
UN-No. (IATA)	:	1090

14.2. UN proper shipping name

Proper Shipping Name (DOT)	:	Acetone
Proper Shipping Name (TDG)	:	ACETONE
Proper Shipping Name (IMDG)	:	ACETONE
Proper Shipping Name (IATA)	:	Acetone

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT)	:	3
Hazard labels (DOT)	:	3



TDG

Transport hazard class(es) (TDG)	:	3
Hazard labels (TDG)	:	3



IMDG

Transport hazard class(es) (IMDG)	:	3
Hazard labels (IMDG)	:	3

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IATA

Transport hazard class(es) (IATA) : 3
Hazard labels (IATA) : 3



14.4. Packing group

Packing group (DOT) : II
Packing group (TDG) : II
Packing group (IMDG) : II
Packing group (IATA) : II

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

DOT

UN-No.(DOT) : UN1090
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.
T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3)
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
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L
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.

TDG

UN-No. (TDG) : UN1090
Explosive Limit and Limited Quantity Index : 1 L
Excepted quantities (TDG) : E2
Passenger Carrying Ship Index : Forbidden
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index : 5 L
Emergency Response Guide (ERG) Number : 127

IMDG

Limited quantities (IMDG) : 1 L

ACETONE-D6 (D, 99.9%) +0.05% V/V TMS

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Excepted quantities (IMDG)	: E2
Packing instructions (IMDG)	: P001
IBC packing instructions (IMDG)	: IBC02
Tank instructions (IMDG)	: T4
Tank special provisions (IMDG)	: TP1
EmS-No. (Fire)	: F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS
EmS-No. (Spillage)	: S-D - SPILLAGE SCHEDULE Delta - FLAMMABLE LIQUIDS
Stowage category (IMDG)	: E
Flash point (IMDG)	: -20°C to -18°C c.c.
Properties and observations (IMDG)	: Colourless, clear liquid, with a characteristic mint-like odour. Flashpoint: -20°C to -18°C c.c. Explosive limits: 2.5% to 13% Miscible with water.
MFAG-No	: 127

IATA

PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y341
PCA limited quantity max net quantity (IATA)	: 1L
PCA packing instructions (IATA)	: 353
PCA max net quantity (IATA)	: 5L
CAO packing instructions (IATA)	: 364
CAO max net quantity (IATA)	: 60L
ERG code (IATA)	: 3H

14.7. 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

ACETONE-D6 (D, 99.9%) +0.05% V/V TMS (67-64-1)

Not subject to reporting requirements of the United States SARA Section 313

CERCLA RQ	5000 lb
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
ACETONE-D6 (D, 99.9%)	67-64-1	Present	Active	
TETRAMETHYLSILANE 99.9%	75-76-3	Not present	-	

ACETONE-D6 (D, 99.9%) (67-64-1)

Not subject to reporting requirements of the United States SARA Section 313

CERCLA RQ	5000 lb
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard

ACETONE-D6 (D, 99.9%) +0.05% V/V TMS

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TETRAMETHYLSILANE 99.9% (75-76-3)

Not subject to reporting requirements of the United States SARA Section 313

SARA Section 311/312 Hazard Classes

Fire hazard

15.2. International regulations

CANADA

ACETONE-D6 (D, 99.9%) +0.05% V/V TMS (67-64-1)

Listed on the Canadian DSL (Domestic Substances List)

ACETONE-D6 (D, 99.9%) (67-64-1)

Listed on the Canadian DSL (Domestic Substances List)

TETRAMETHYLSILANE 99.9% (75-76-3)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

ACETONE-D6 (D, 99.9%) +0.05% V/V TMS (67-64-1)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Listed on TECI (Thailand Existing Chemicals Inventory)

ACETONE-D6 (D, 99.9%) (67-64-1)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Listed on TECI (Thailand Existing Chemicals Inventory)

TETRAMETHYLSILANE 99.9% (75-76-3)

CAUTION: This material is supplied for research and development purposes subject to the R&D exemption under TSCA, 40 CFR 720.36, and must meet the requirements of the exemption, including supervision by a "technically qualified individual" as defined by 40 CFR 720.3(ee). The use of this material for "commercial purposes" as defined by 40 CFR 720.3(r) is not permitted in the United States.

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Listed on TECI (Thailand Existing Chemicals Inventory)

15.3. US State regulations

ACETONE-D6 (D, 99.9%) +0.05% V/V TMS (67-64-1)

State or local regulations

U.S. - Massachusetts - Right To Know List

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) List

Component	State or local regulations
ACETONE-D6 (D, 99.9%) (67-64-1)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
TETRAMETHYLSILANE 99.9%(75-76-3)	U.S. - New Jersey - Right to Know Hazardous Substance List

ACETONE-D6 (D, 99.9%) +0.05% V/V TMS

Safety Data Sheet

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SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date : 06/07/2023

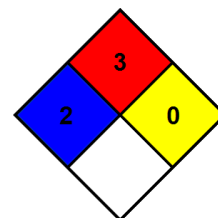
Other information : This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the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

Full text of H-phrases	
H224	Extremely flammable liquid and vapor
H225	Highly flammable liquid and vapor
H319	Causes serious eye irritation
H336	May cause drowsiness or dizziness

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.



Hazard Rating

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

Flammability : 3 Serious Hazard - Materials capable of ignition under almost all normal temperature conditions. Includes flammable liquids with flash points below 73 F and boiling points above 100 F. as well as liquids with flash points between 73 F and 100 F. (Classes IB IC)

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Safety Data Sheet (SDS), USA

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.