



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

Safety Data Sheet

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

Date of issue: 09/06/2015

Revision date: 09/07/2015

Version: 2

DLM-9TA

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

1.1. Product identifier

Product form : Substance
Substance name : ACETONE-D6 (D, 99.9%) +1% V/V TMS
EC index no : 606-001-00-8
EC no : 200-662-2
Product code : DLM-9TA
Formula : CD₃COCD₃

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

1.2.1. Relevant identified uses

Industrial/Professional use spec : For professional use only.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

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

USA: 1-800-322-1174 Int: 1-978-749-8000
cilsales@isotope.com 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
STOT SE 3 H336

Full text of H-phrases: see section 16

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

Not classified

Classification (GHS-US)

Flam. Liq. 2 H225
Eye Irrit. 2A H319
STOT SE 3 H336

Adverse physicochemical, human health and environmental effects

Liver, Kidney.

2.2. Label elements

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

Hazard pictograms (CLP) :



GHS02



GHS07

ACETONE-D6 (D, 99.9%) +1% V/V TMS DLM-9TA

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

Signal word (CLP)	: Danger
Hazard statements (CLP)	: H225 - Highly flammable liquid and vapor H319 - Causes serious eye irritation H336 - May cause drowsiness or dizziness
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 P261 - Avoid breathing fume, spray, mist, vapors P264 - Wash both hands thoroughly after handling P271 - Use only outdoors or in a well-ventilated area P280 - Wear eye protection, face protection, protective clothing, protective gloves

GHS-US labeling

Hazard pictograms (GHS-US)	:		
		GHS02	GHS07

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
Precautionary statements (GHS-US)	: P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking P233 - Keep container tightly closed P240 - Ground/bond container and receiving equipment P241 - Use explosion-proof electrical, lighting, ventilating equipment P242 - Use only non-sparking tools P243 - Take precautionary measures against static discharge P261 - Avoid breathing fume, 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): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P312 - Call a POISON CENTER/doctor/physician 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., Water spray for extinction P403+P233 - Store in a well-ventilated place. Keep container tightly closed P403+P235 - Store in a well-ventilated place. Keep cool P405 - Store locked up P501 - Dispose of contents/container to Comply with applicable regulations.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Name	: ACETONE-D6 (D, 99.9%) +1% V/V TMS
EC no	: 200-662-2
EC index no	: 606-001-00-8

Name	Product identifier	%	Classification according to Directive 67/548/EEC
ACETONE-D6 (D, 99.9%)	(CAS No) 666-52-4 (EC no) 200-662-2 (EC index no) 606-001-00-8	99	F; R11 Xi; R36 R66 R67
TETRAMETHYLSILANE 99.9%	(CAS No) 75-76-3 (Unlabeled) (EC no) 200-899-1	1	F+; R12

ACETONE-D6 (D, 99.9%) +1% V/V TMS DLM-9TA

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

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
ACETONE-D6 (D, 99.9%)	(CAS No) 666-52-4 (EC no) 200-662-2 (EC index no) 606-001-00-8	99	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
TETRAMETHYLSILANE 99.9%	(CAS No) 75-76-3 (Unlabeled) (EC no) 200-899-1	1	Flam. Liq. 1, H224

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

Name : ACETONE-D6 (D, 99.9%) +1% V/V TMS

EC no : 200-662-2

EC index no : 606-001-00-8

Name	Product identifier	%	Classification (GHS-US)
ACETONE-D6 (D, 99.9%)	(CAS No) 666-52-4	99	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336

Full text of H-phrases: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Move out of dangerous area. Consult a physician and show this safety data sheet.
- First-aid measures after inhalation : Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.
- First-aid measures after skin contact : Wash with soap and water. Get medical attention if irritation develops or persists.
- First-aid measures after eye contact : Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.
- First-aid measures after ingestion : Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

- Symptoms/injuries : Harmful if swallowed, inhaled or absorbed through skin.
- Symptoms/injuries after inhalation : Harmful if inhaled. Causes respiratory tract irritation. Vapors may cause drowsiness and dizziness.
- Symptoms/injuries after skin contact : Harmful if absorbed through skin. Prolonged or repeated contact can result in drying of the skin which may result in skin irritation.
- Symptoms/injuries after eye contact : Causes eye irritation.
- Symptoms/injuries after ingestion : Harmful if swallowed.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

No additional information available

5.2. Special hazards arising from the substance or mixture

Reactivity : Vapors may form explosive mixture with air.

5.3. Advice for firefighters

- Firefighting instructions : Use water spray to cool unopened containers.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

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

ACETONE-D6 (D, 99.9%) +1% V/V TMS DLM-9TA

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

6.3. Methods and material for containment and cleaning up

For containment : Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Avoid contact with skin and eyes. Keep away from sources of ignition.
Hygiene measures : Wash hands before eating and wash before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep container tightly closed in a cool, dry and well-ventilated place.
Storage conditions : Store at room temperature away from light and moisture.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

ACETONE-D6 (D, 99.9%) +1% V/V TMS		
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	500.0000000000 ppm Eye & Upper Respiratory irritation, Central Nervous System impairment.
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	750.0000000000 ppm Eye & Upper Respiratory irritation, Central Nervous System impairment.
USA OSHA	OSHA PEL (TWA) (ppm)	750.0000000000 ppm The acetone STEL does not apply to the cellulose acetate fiber industry.
USA OSHA	OSHA PEL (STEL) (ppm)	1000.0000000000 ppm The acetone STEL does not apply to the cellulose acetate fiber industry.

ACETONE-D6 (D, 99.9%) (666-52-4)		
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	500.0000000000 ppm Eye & Upper Respiratory irritation, Central Nervous System impairment.
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	750.0000000000 ppm Eye & Upper Respiratory irritation, Central Nervous System impairment.
USA OSHA	OSHA PEL (TWA) (ppm)	750.0000000000 ppm The acetone STEL does not apply to the cellulose acetate fiber industry.
USA OSHA	OSHA PEL (STEL) (ppm)	1000.0000000000 ppm The acetone STEL does not apply to the cellulose acetate fiber industry.

8.2. Exposure controls

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



Hand protection : Wear suitable protective clothing and gloves.
Eye protection : Wear safety glasses with side shields (or goggles) and a face shield.
Skin and body protection : Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Respiratory protection : Wear appropriate NIOSH/MSHA approved respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Appearance : Liquid, clear.
Molecular mass : 64.12
Color : Colourless.
Odor : No data available
Odor threshold : No data available
pH : No data available
Relative evaporation rate (butyl acetate=1) : No data available
Melting point : -94 °C (-137 °F)

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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

Freezing point	: No data available
Boiling point	: 56 °C (133 °F) at 1,013 hPa (760 mmHg)
Flash point	: -17.0 °C (1.4 °F) - closed cup
Self ignition temperature	: 465 °C (869 °F)
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: 533.3 hPa (400.0 mmHg) at 39.5 °C (103.1 °F)
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: Water: 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
Explosive limits	: 2 - 13 % (V)

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Vapors may form explosive mixture with air.

10.2. Chemical stability

Stable if stored under recommended conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Keep away from heat, sparks and flame.

10.5. Incompatible materials

Bases, Oxidizing agents, Reducing agents. Reacts violently with phosphorous oxychloride.

10.6. Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

ACETONE-D6 (D, 99.9%) +1% V/V TMS	
LD50 oral rat	5800 mg/kg
LC50 inhalation rat (mg/l)	50100 mg/m ³ 8 h
ATE (oral)	5800.000 mg/kg body weight
ATE (vapors)	50.100 mg/l/4h
ATE (dust, mist)	50.100 mg/l/4h

ACETONE-D6 (D, 99.9%) (666-52-4)	
LD50 oral rat	5800 mg/kg
LC50 inhalation rat (mg/l)	50100 mg/m ³ 8 h
ATE (oral)	5800.000 mg/kg body weight
ATE (vapors)	50.100 mg/l/4h
ATE (dust, mist)	50.100 mg/l/4h
LD50 Dermal Guinea Pig	7,426 mg/kg

Skin corrosion/irritation	: Not classified skin - rabbit - Mild skin irritation - 24 h
Serious eye damage/irritation	: Causes serious eye irritation. Eyes - rabbit - Eye irritation - 24 h
Respiratory or skin sensitization	: Chronic exposure may cause dermatitis. No data available

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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

Germ cell mutagenicity	: Not available.
Carcinogenicity	: This product is or contains a component that is not classifiable as to its carcinogenicity on its IARC, ACGIH, NTP, or EPA classification.
Reproductive toxicity	: Not available.
Specific target organ toxicity (single exposure)	: May cause drowsiness or dizziness. May cause damage to organs.
Specific target organ toxicity (repeated exposure)	: Not classified No data available
Aspiration hazard	: Not classified
Symptoms/injuries after inhalation	: Harmful if inhaled. Causes respiratory tract irritation. Vapors may cause drowsiness and dizziness.
Symptoms/injuries after skin contact	: Harmful if absorbed through skin. Prolonged or repeated contact can result in drying of the skin which may result in skin irritation.
Symptoms/injuries after eye contact	: Causes eye irritation.
Symptoms/injuries after ingestion	: Harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

ACETONE-D6 (D, 99.9%) +1% V/V TMS	
LC50 fish 1	5540.00 mg/l Oncorhynchus mykiss (rainbow trout) - 96 h
EC50 Daphnia 1	13500.00 mg/l Daphnia magna (Water flea) - 48 h

ACETONE-D6 (D, 99.9%) (666-52-4)	
LC50 fish 1	5540.00 mg/l Oncorhynchus mykiss (rainbow trout) - 96 h
EC50 Daphnia 1	13500.00 mg/l Daphnia magna (Water flea) - 48 h

12.2. Persistence and degradability

ACETONE-D6 (D, 99.9%) +1% V/V TMS	
Persistence and degradability	Not available.

TETRAMETHYLSILANE 99.9% (75-76-3 (Unlabeled))	
Persistence and degradability	Not available.

ACETONE-D6 (D, 99.9%) (666-52-4)	
Persistence and degradability	Not available.

12.3. Bioaccumulative potential

ACETONE-D6 (D, 99.9%) +1% V/V TMS	
Log Pow	-0.24
Bioaccumulative potential	Not available.

TETRAMETHYLSILANE 99.9% (75-76-3 (Unlabeled))	
Bioaccumulative potential	Not available.

ACETONE-D6 (D, 99.9%) (666-52-4)	
Log Pow	-0.24
Bioaccumulative potential	Not available.

12.4. Mobility in soil

ACETONE-D6 (D, 99.9%) +1% V/V TMS	
Ecology - soil	Not available.

TETRAMETHYLSILANE 99.9% (75-76-3 (Unlabeled))	
Ecology - soil	Not available.

ACETONE-D6 (D, 99.9%) (666-52-4)	
Ecology - soil	Not available.

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

Other adverse effects : Not available.

ACETONE-D6 (D, 99.9%) +1% V/V TMS DLM-9TA

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

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.

SECTION 14: Transport information

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

14.1. UN number

UN-No.(DOT) : UN1090

14.2. UN proper shipping name

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



Packing group (DOT) : II - Medium Danger
DOT Special Provisions (49 CFR 172.102) : IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.
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 RQ : 5000 lbs.
Marine pollutant : No

14.3. Additional information

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
Danger labels (ADR) : 3 - Flammable liquids



Orange plates : An orange rectangular label with a black border. It is divided into two horizontal sections. The top section contains the number '33' and the bottom section contains the number '1090'.

Tunnel restriction code : D/E
Limited quantities (ADR) : 1L
EAC : •2YE
Excepted quantities (ADR) : E2

ACETONE-D6 (D, 99.9%) +1% V/V TMS DLM-9TA

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

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 : 5 L
(49 CFR 173.27)

DOT Quantity Limitations Cargo aircraft only (49 : 60 L
CFR 175.75)

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

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

SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard
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ACETONE-D6 (D, 99.9%) (666-52-4)

SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard
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15.2. International regulations

CANADA

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

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

15.2.1. National regulations

No additional information available

15.3. US State regulations

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

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 This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.
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ACETONE-D6 (D, 99.9%) (666-52-4)

U.S. - Massachusetts - Right To Know List
U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - New Jersey - Right to Know Hazardous Substance List
This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16: Other information

ACETONE-D6 (D, 99.9%) +1% V/V TMS DLM-9TA

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

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.

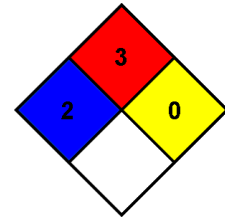
Full text of R-, H- and EUH-phrases::

Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Flam. Liq. 1	Flammable liquids Category 1
Flam. Liq. 2	Flammable liquids Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H224	Extremely flammable liquid and vapor
H225	Highly flammable liquid and vapor
H319	Causes serious eye irritation
H336	May cause drowsiness or dizziness
R11	Highly flammable
R12	Extremely flammable
R36	Irritating to eyes
R66	Repeated exposure may cause skin dryness or cracking
R67	Vapors may cause drowsiness and dizziness
F	Highly flammable
F+	Extremely flammable
Xi	Irritant

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

NFPA fire hazard : 3 - Liquids and solids that can be ignited under almost all ambient conditions.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

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

Flammability : 3 Serious Hazard

Physical : 0 Minimal Hazard

CIL Multi-Solvent 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