

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: 07/06/2011 Revision date: 10/08/2022 Supersedes: 02/09/2021 Version: 3.2

DLM-412

SECTION 1: Identification of the substance/mixture and of the company/undertaking 1.1. **Product identifier** Product form : Substance : ETHANOL (METHYL-D3, 98%) (<6% H2O) Substance name : 603-002-00-5 (Unlabeled) EC Index-No. EC-No. : 200-578-6 (Unlabeled) CAS-No. : 1759-87-1 Product code : DLM-412 : CD3CH2OH Formula Synonyms : Absolute alcohol Relevant identified uses of the substance or mixture and uses advised against 1.2. 1.2.1. **Relevant identified uses** Main use category : Professional use : For professional use only Industrial/Professional use spec 1.2.2 Uses advised against No additional information available Details of the supplier of the safety data sheet 1.3. 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** Classification of the substance or mixture 2.1. Classification according to Regulation (EC) No. 1272/2008 [CLP] Flam. Liq. 2 H225 Skin Irrit. 2 H315 Eye Irrit. 2 H319 STOT SE 3 H335

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

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

F; R11 Xi; R36/37/38 Full text of R-phrases: see section 16

GHS-US classification

Flam. Liq. 2 H225 Skin Irrit. 2 H315 Eye Irrit. 2 H319 STOT SE 3 H335 Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

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



2.3. Other hazards

No additional information available

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

SECTION 3: Composition/Information o	n ingredients		
3.1. Substances			
Name	Product identifier	%	Classification according to Directive 67/548/EEC
ETHANOL (METHYL-D3, 98%) (<6% H2O)	(CAS-No.) 1759-87-1 (EC-No.) 200-578-6 (Unlabeled) (EC Index-No.) 603-002-00-5 (Unlabeled)	100	F; R11 Xi; R36/37/38
Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
ETHANOL (METHYL-D3, 98%) (<6% H2O)	(CAS-No.) 1759-87-1 (EC-No.) 200-578-6 (Unlabeled) (EC Index-No.) 603-002-00-5 (Unlabeled)	100	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335

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

Name	Product identifier	%	GHS-US classification
ETHANOL (METHYL-D3, 98%) (<6% H2O) (Main constituent)	(CAS-No.) 1759-87-1	100	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335

Full text of H-ph stion 16

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	: If you feel unwell, seek medical advice (show the label where possible). Evacuate danger area.	
First-aid measures after inhalation	: When symptoms occur: go into open air and ventilate suspected area. If not breathing, give artificial respiration. Get medical advice/attention. 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	: Wash with plenty of soap and water. Get immediate medical advice/attention. 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 skin with plenty of water. Get medical advice/attention. Specific treatment (see Hazard pictograms (CLP) on this label).	
First-aid measures after eye contact	: Rinse cautiously with water for several minutes.	
First-aid measures after ingestion	: Never give anything by mouth to an unconscious person. Rinse mouth out with water. Get medical advice/attention.	
4.2. Most important symptoms and effect	ts, both acute and delayed	
Symptoms/effects after inhalation	: May be harmful if inhaled. May cause respiratory irritation. May cause respiratory irritation.	
Symptoms/effects after skin contact	: May be harmful in contact with skin. Causes skin irritation.	
Symptoms/effects after eye contact	: Causes serious eye irritation.	
Symptoms/effects after ingestion	: May be 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	
Suitable extinguishing media	: Water spray. Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO2).
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.
5.3. Advice for firefighters	
Firefighting instructions	: Fight fire with normal precautions from a reasonable distance. Wear a self contained breathing apparatus. 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. Wear recommended personal protective equipment.
Other information	: Use water spray to cool unopened containers.

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

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SECTION 6: Accidental release mea	sures	
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	: Avoid breathing vapors, mist, gas. Avoid dust formation.	
6.1.2. For emergency responders		
No additional information available		
6.2. Environmental precautions		
Prevent entry to sewers and public waters. Do r	not allow to enter drains or water courses. Avoid release to the environment.	
6.3. Methods and material for containm	ent and cleaning up	
For containment	: Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. Comply with local regulations for disposal. Stop leak, if possible without risk. Contain large spillage with sand or earth.	
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	: Handle empty containers with care because residual vapors are flammable.	
Precautions for safe handling	: Provide adequate ventilation to minimize dust and/or vapor concentrations. No open flames. No smoking. Use only non-sparking tools. Avoid breathing fume, gas, mist, spray, vapors. Use only outdoors or in a well-ventilated area.	
Hygiene measures	: Wash hands, forearms and face thoroughly after handling.	
7.2. Conditions for safe storage, include	ing any incompatibilities	
Technical measures	 Store in a well-ventilated place. Keep container tightly closed. Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof ventilating equipment. 	
Storage conditions	: Store at room temperature away from light and moisture.	
Incompatible materials	: Heat sources.	
7.3. Specific end use(s)		
No additional information available		

No additional information available

SECTION 8: Exposure controls/personal protection

ETHANOL (METHYL-D3, 98%		
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	1000.00000000 ppm Remarks:Upper Respiratory Tract irritation Confirmed animal carcinogen with unknown relevance to humans; USA. ACGIH Threshold Limit Values (TLV)
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	1000 ppm Remarks: Upper Respiratory Tract irritation Confirmed animal carcinogen with unknown relevance to humans ; USA. ACGIH Threshold Limit Values (TLV)
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	1900 USA. NIOSH Recommended Exposure Limits
USA NIOSH	NIOSH REL (TWA) (ppm)	1000 ppm USA. NIOSH Recommended Exposure Limits
USA OSHA	OSHA PEL (TWA) (mg/m³)	1900 mg/m ³ The value in mg/m3 is approximate ;USA Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
USA OSHA	OSHA PEL (TWA) (ppm)	1000 ppm USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants

Exposure controls 8.

Appropriate engineering controls

: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

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

Personal protective equipment	: Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus.
Materials for protective clothing	: Wear suitable protective clothing and gloves.
Hand protection	: Wear suitable protective clothing and gloves.
Eye protection	: Wear eye protection. Chemical goggles or face shield with safety glasses.
Skin and body protection	: Wear suitable protective clothing, gloves and eye/face protection. Wear suitable protective clothing.
Respiratory protection	: In case of inadequate ventilation wear respiratory protection. Approved supplied air respirator.
Environmental exposure controls	: Avoid release to the environment.

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid
Molecular mass	: 49.09 g/mol (Labeled)
Color	: Colorless
Odor	: No data available
Odor threshold	: No data available
рН	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: -143.99 °C (-227.18 °F)
Freezing point	: No data available
Boiling point	: 78 - 80 °C (172.4 - 176.0 °F)
Flash point	: 14 °C (57.2 °F) - closed cup
Auto-ignition temperature	: 363 °C (685.4 °F)
Decomposition temperature	: No data available
Flammability (solid, gas)	: Highly flammable liquid and vapor
Vapor pressure	: 59.5 hPa (44.6 mmHg) at 20.0 °C (68.0 °F)
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Specific gravity / density	: 0.7974 g/ml
Solubility	: Water: completely soluble
Log Pow	: -0.349 at 24 °C (75 °F)
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	: 3.3 - 19 vol %

9.2. **Other information**

No additi	No additional information available		
SECTIO	DN 10: Stability and reactivity		
10.1.	Reactivity		
No additi	onal information available		
10.2.	Chemical stability		
Stable if s	stored under recommended conditions.		
10.3.	Possibility of hazardous reactions		
Vapors m	ay form explosive mixture with air		
10.4.	Conditions to avoid		
Open flar	ne, Direct sunlight, Heat, Sparks		
10.5.	Incompatible materials		
Strong ox	idizing agents, Alkali metals, Peroxides		

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

10.6. Hazardous decomposition products	10.6. Hazardous decomposition products	
Carbon oxides (CO, CO2), May release flammable gases		
SECTION 11: Toxicological information		
11.1. Information on toxicological effects		
Acute toxicity	: Not classified	
ETHANOL (METHYL-D3, 98%) (<6% H2O) (17	59-87-1)	
LD50 oral rat	10470 mg/kg	
LD50 dermal rabbit	15800 mg/kg	
LC50 inhalation rat (mg/l)	30000 mg/l/4h	
Skin corrosion/irritation	: Skin. rabbit. No skin irritation. 24 Hours. (OECD 404 method)	
Serious eye damage/irritation	: Eyes. rabbit. moderate eye irritation. (OECD 405 method)	
Respiratory or skin sensitization	: Not classified	
Germ cell mutagenicity	: Not classified	
Carcinogenicity	: Carcinogenicity. mouse. oral. Tumorigenic: Carcinogenic by RTECS criteria. Liver: Tumors. blood	
Reproductive toxicity	: Reproductive toxicity. Reproductive toxicity - Human - female - Oral Effects on Newborn: Apgar score (human only). Effects on Newborn: Other neonatal measures or effects. Effects on Newborn: Drug dependence.	
Specific target organ toxicity - single exposure	: May cause respiratory irritation.	
Specific target organ toxicity – repeated exposure	: Not classified	
Aspiration hazard	: Not classified	
Potential Adverse human health effects and symptoms	: CNS depression. Narcosis. Damage to heart. Stomach - Irregularities - Based on Human Evidence. 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.	
Symptoms/effects after inhalation	: May be harmful if inhaled. May cause respiratory irritation. May cause respiratory irritation.	
Symptoms/effects after skin contact	: May be harmful in contact with skin. Causes skin irritation.	
Symptoms/effects after eye contact	: Causes serious eye irritation.	
Symptoms/effects after ingestion	: May be harmful if swallowed.	

SECTION 12: Ecological information		
ETHANOL (METHYL-D3, 98%) (<6% H2O) (1759-87-1)		
14200 mg/l - Pimephales promelas (fathead minnow) - 96 h		
5012 mg/l - Ceriodaphnia dubia (water flea) - 48 h		
275 mg/l - Chlorella vulgaris (Fresh water algae) - 72 h (OECD Test Guideline 201)		
9.6 mg/l - Daphnia magna (Water flea) - 9 d		

12.2. Persistence and degradability		
ETHANOL (METHYL-D3, 98%) (<6% H2O) (1759-87-1)		
Biodegradation	95 % Result: - Readily biodegradable	
12.3. Bioaccumulative potential		
ETHANOL (METHYL-D3, 98%) (<6% H2O) (1759-87-1)		
Log Pow	-0.349 at 24 °C (75 °F)	
Bioaccumulative potential	Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.	
12.4. Mobility in soil		
No additional information available		
12.5. Results of PBT and vPvB assessment		
No additional information available		
12.6. Other adverse effects		
Other adverse effects	: Toxic to aquatic life with long lasting effects. Avoid release to the environment.	

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

SECTION 13: Disposal consideration	ns
13.1. Waste treatment methods	
Regional legislation (waste)	 Waste materials should be disposed of under conditions which meet Federal, State, and local environmental control regulations.
Product/Packaging disposal recommendations	: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.
Ecology - waste materials	: Dispose of as unused product.
SECTION 14: Transport information	
In accordance with ADR / RID / IMDG / IATA / A	DN
14.1. UN number	
UN-No.(DOT)	: 1170
DOT NA no.	UN1170
14.2. UN proper shipping name	
Proper Shipping Name (DOT)	: Ethyl alcohol solutions
Class (DOT)	: 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
Hazard labels (DOT)	: 3 - Flammable liquid
	FLAMMABLE LIQUID
Packing group (DOT)	: II - Medium Danger
DOT Special Provisions (49 CFR 172.102)	 24 - Alcoholic beverages containing more than 70 percent alcohol by volume must be transported as materials in Packing Group II. Alcoholic beverages containing more than 24 percent but not more than 70 percent alcohol by volume must be transported as materials in Packing Group III. 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
DOT Packaging Exceptions (49 CFR 173.xxx)	: 4b;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.
Special transport precautions	: Not classified as dangerous in the meaning of transport regulations.
Overland transport	
Packing group (ADR)	: 11
Class (ADR)	: 3 - Flammable liquid
Hazard identification number (Kemler No.)	
Classification code (ADR)	. 55 : F1
Hazard labels (ADR)	: 3 - Flammable liquids
Orange plates	33 1170
Tunnel restriction code (ADR)	: D/E
Limited quantities (ADR)	11
10/08/2022	EN (English US) 7/9

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

Excepted quantities (ADR)	: E2
Transport by sea	
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
MFAG-No	: 127
Air transport	
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 5L
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	
Special transport precautions	: Not classified as dangerous in the meaning of transport regulations.

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 ETHANOL (METHYL-D3, 98%) (<6% H2O) (1759-87-1) SARA Section 302 Threshold Planning Not subject to reporing requirements of the United States SARA Section 302. Quantity (TPQ) SARA Section 311/312 Hazard Classes Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard SARA Section 313 - Emission Reporting Not subject to reporing requirements of the United States SARA Section 313.

15.2. International regulations

CANADA

ETHANOL (METHYL-D3, 98%) (<6% H2O) (1759-87-1)	
Listed on the Canadian DSL (Domestic Substances List)	

15.2.1. **National regulations**

No additional information available

15.3. US State regulations

ETHANOL (METHYL-D3, 98%) (<6% H2O)(1759-87-1)		
U.S California - Proposition 65 - Carcinogens List	No	
U.S California - Proposition 65 - Developmental Toxicity	No	
U.S California - Proposition 65 - Reproductive Toxicity - Female	No	
U.S California - Proposition 65 - Reproductive Toxicity - Male	No	
State or local regulations	RTK - U.S Massachusetts - Right To Know List RTK - U.S New Jersey - Right to Know Hazardous Substance List RTK - U.S Pennsylvania - RTK (Right to Know) List	

SECTION 16: Other information

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

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:	
	with the October 10

Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Flam. Liq. 2	Flammable liquids Category 2
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H225	Highly flammable liquid and vapor
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
R11	Highly flammable
R36/37/38	Irritating to eyes, respiratory system and skin
F	Highly flammable
Xi	Irritant

NFPA health hazard

NFPA fire hazard

NFPA reactivity

- : 2 Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.
- : 3 Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions.
- : 0 Material that in themselves are normally stable, even under fire conditions.



Hazard Rating

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

- : 3 Serious Hazard
 - : 0 Minimal Hazard

CIL Substance 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