



VITAMIN D2 SULFATE, SODIUM SALT 97% CP (6,19,19-D3, 98%) 100 UG/ML IN ETHANOL

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: 02/01/2018

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Version: 1.1

DLM-10478-C

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

1.1. Product identifier

Product form : Mixtures
Product name : VITAMIN D2 SULFATE, SODIUM SALT 97% CP (6,19,19-D3, 98%) 100 UG/ML IN ETHANOL
Product code : DLM-10478-C

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 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
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. 2A H319
STOT SE 3 H335

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

Nerves. heart. liver. Highly flammable liquid and vapor. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation.

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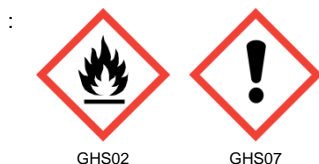
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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

2.2. Label elements

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

Hazard pictograms (CLP)



Signal word (CLP)

: Danger

Hazardous ingredients

: ETHANOL UNLABELED

Hazard statements (CLP)

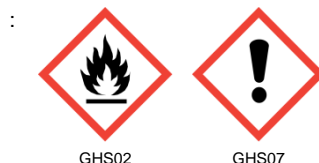
: H225 - Highly flammable liquid and vapor
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H335 - May cause respiratory irritation

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 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
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H335 - May cause respiratory irritation

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 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
P302+P352 - If on skin: Wash with plenty of water
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 doctor if you feel unwell
P321 - Specific treatment (see Hazardous component(s) for labeling on this label)
P332+P313 - If skin irritation occurs: Get medical advice/attention
P337+P313 - If eye irritation persists: Get medical advice/attention
P362 - Take off contaminated clothing and wash it before reuse
P370+P378 - In case of fire: Use alcohol resistant foam, carbon dioxide (CO2), dry 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

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2.3. Other hazards

PBT: not yet assessed

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Directive 67/548/EEC
ETHANOL UNLABELED	(CAS No) 64-17-5 (EC No) 200-578-6 (EC Index No) 603-002-00-5 (REACH-no) 01-2119457610-43	99.987	F; R11 Xi; R36/37/38
VITAMIN D2 SULFATE, SODIUM SALT 97% CP (6,19,19-D3, 98%)	(CAS No) 1784-46-9 (Unlabeled)	0.013	T+; R26 T; R48/24/25

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
ETHANOL UNLABELED	(CAS No) 64-17-5 (EC No) 200-578-6 (EC Index No) 603-002-00-5 (REACH-no) 01-2119457610-43	99.987	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
VITAMIN D2 SULFATE, SODIUM SALT 97% CP (6,19,19-D3, 98%)	(CAS No) 1784-46-9 (Unlabeled)	0.013	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 1 (Inhalation), H330 STOT RE 1, H372

Name	Product identifier	%	GHS-US classification
ETHANOL UNLABELED	(CAS No) 64-17-5	99.987	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335
VITAMIN D2 SULFATE, SODIUM SALT 97% CP (6,19,19-D3, 98%)	(CAS No) 1784-46-9 (Unlabeled)	0.013	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 1 (Inhalation), H330 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	: If you feel unwell, seek medical advice (show the label where possible). Evacuate danger area.
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: Gently wash with plenty of soap and water, Get immediate medical advice/attention. 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 effects, both acute and delayed

Symptoms/injuries after inhalation	: May be harmful if inhaled. May cause respiratory irritation. May cause respiratory irritation.
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: Causes serious eye irritation.
Symptoms/injuries 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).

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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. 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 exposed surfaces.

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 : Use personal protective equipment as required. Avoid breathing vapors, mist, gas. Ensure adequate air ventilation. Evacuate unnecessary personnel. No flames, no sparks. Eliminate all sources of ignition. Provide adequate ventilation to minimize dust and/or vapor concentrations. Special attention should be given to low areas/pits where flammable vapors can accumulate.

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 : Collect spillage. Clean up any spills as soon as possible, using an absorbent material to collect it. Vacuum with an equipment that avoids ignition risk. 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.

6.4. Reference to other sections

- For further information refer to section 13.

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 : Avoid all eye and skin contact and do not breathe vapor and mist. Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge. Use only non-sparking tools. Avoid breathing vapors, spray, mist, gas, fume, dust. Use only outdoors or in a well-ventilated area.
Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Wash hands, forearms and face thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Keep container tightly closed in a cool, dry and well-ventilated place. Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof Lighting equipment, ventilating equipment.
Storage conditions : Store in freezer (-20°C). Protect from light.
Incompatible materials : Heat sources.

7.3. Specific end use(s)

- No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

VITAMIN D2 SULFATE, SODIUM SALT 97% CP (6,19,19-D3, 98%) 100 UG/ML IN ETHANOL

Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	1000.0000000 ppm
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VITAMIN D2 SULFATE, SODIUM SALT 97% CP (6,19,19-D3, 98%) 100 UG/ML IN ETHANOL		
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	1000 ppm
Italy - Portugal - USA ACGIH	Remark (ACGIH)	Upper Respiratory Tract irritation. Confirmed animal carcinogen with unknown relevance to humans.
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	1900 mg/m ³
USA NIOSH	NIOSH REL (TWA) (ppm)	1000 ppm
USA NIOSH	Remark (NIOSH)	Upper Respiratory Tract irritation. Confirmed animal carcinogen with unknown relevance to humans.
USA OSHA	OSHA PEL (TWA) (mg/m ³)	1900 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	1000 ppm
USA OSHA	Remark (OSHA)	Upper Respiratory Tract irritation. Confirmed animal carcinogen with unknown relevance to humans. The value in mg/m ³ is approximate.

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Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	1000.00000000 ppm
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	1000 ppm
Italy - Portugal - USA ACGIH	Remark (ACGIH)	Upper Respiratory Tract irritation. Confirmed animal carcinogen with unknown relevance to humans.
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	1900 mg/m ³
USA NIOSH	NIOSH REL (TWA) (ppm)	1000 ppm
USA NIOSH	Remark (NIOSH)	Upper Respiratory Tract irritation. Confirmed animal carcinogen with unknown relevance to humans.
USA OSHA	OSHA PEL (TWA) (mg/m ³)	1900 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	1000 ppm
USA OSHA	Remark (OSHA)	Upper Respiratory Tract irritation. Confirmed animal carcinogen with unknown relevance to humans. The value in mg/m ³ is approximate.

VITAMIN D2 SULFATE, SODIUM SALT 97% CP (6,19,19-D3, 98%) 100 UG/ML IN ETHANOL	
DNEL/DMEL (Workers)	
Acute - systemic effects, inhalation	1900 mg/m ³
Long-term - systemic effects, dermal	343 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	950 mg/m ³
DNEL/DMEL (additional information)	
Additional information	DNEL - Workers - Ingestion - Long-term systemic effects - 343 mg/kg BW/d
PNEC (Water)	
PNEC aqua (freshwater)	0.96 mg/l
PNEC aqua (marine water)	0.79 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	3.6 mg/kg dwt
PNEC (Soil)	
PNEC soil	0.63 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	580 mg/l

8.2. Exposure controls

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

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Respiratory protection : In case of inadequate ventilation wear respiratory protection. Approved supplied air respirator.
Environmental exposure controls : Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

The properties listed below are for the solvent, the main component of this mixture.

Physical state : Liquid
Appearance : Liquid, clear
Molecular mass : 46.07 g/mol
Color : Colorless
Odor : No data available
Odor threshold : No data available
pH : No data available
Relative evaporation rate (butyl acetate=1) : No data available
Melting point : -114 °C (-173 °F)
Freezing point : No data available
Boiling point : 78 °C (172 °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 °C (68 °F)
Relative vapor density at 20 °C : No data available
Relative density : No data available
Specific gravity / density : 0.789 g/ml at 25 °C (77 °F)
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 %

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Highly flammable liquid and vapor. May form flammable/explosive vapor-air mixture.

10.2. Chemical stability

See storage and expiration date on CoA.

10.3. Possibility of hazardous reactions

Hygroscopic.

10.4. Conditions to avoid

Heat. Open flame. Direct sunlight. Sparks.

10.5. Incompatible materials

Alkali metals. ammonia. Oxidizing agent. Peroxides.

10.6. Hazardous decomposition products

Carbon oxides (CO, CO₂).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

VITAMIN D2 SULFATE, SODIUM SALT 97% CP (6,19,19-D3, 98%) 100 UG/ML IN ETHANOL

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VITAMIN D2 SULFATE, SODIUM SALT 97% CP (6,19,19-D3, 98%) 100 UG/ML IN ETHANOL	
LD50 oral rat	10470 mg/kg
LD50 dermal rat	15800 mg/kg
LC50 inhalation rat (mg/l)	30000 mg/l
ATE CLP (oral)	10470.000 mg/kg body weight
ATE CLP (dermal)	15800.000 mg/kg body weight
ATE CLP (vapors)	30000.000 mg/l/4h
ATE CLP (dust, mist)	30000.000 mg/l/4h
ETHANOL UNLABELED (64-17-5)	
LD50 oral rat	10470 mg/kg
LD50 dermal rat	15800 mg/kg
LC50 inhalation rat (mg/l)	30000 mg/l
ATE CLP (oral)	10470.000 mg/kg body weight
ATE CLP (dermal)	15800.000 mg/kg body weight
ATE CLP (vapors)	30000.000 mg/l/4h
ATE CLP (dust, mist)	30000.000 mg/l/4h
VITAMIN D2 SULFATE, SODIUM SALT 97% CP (6,19,19-D3, 98%) (1784-46-9 (Unlabeled))	
ATE CLP (oral)	100.000 mg/kg body weight
ATE CLP (dermal)	300.000 mg/kg body weight
ATE CLP (gases)	10.000 ppmV/4h
ATE CLP (vapors)	0.050 mg/l/4h
ATE CLP (dust, mist)	0.005 mg/l/4h

Skin corrosion/irritation	: Causes skin irritation. Skin Rabbit No skin irritation (OECD 404 method)
Serious eye damage/irritation	: Causes serious eye irritation. Eyes Rabbit Moderate eye irritation (OECD 404 method)
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Carcinogenicity - Mouse - Oral Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Liver: Tumors. Blood: Lymphomas including Hodgkin's disease.
Reproductive toxicity	: Reproductive toxicity. oral. human. female. Effects on Newborn: Other neonatal measures or effects. Reproductive toxicity Oral - human - female - Effects on Newborn: Apgar score (human only). 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. Risk of serious damage. to. heart. 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. Stomach - Irregularities - Based on Human Evidence.
Symptoms/injuries after inhalation	: May be harmful if inhaled. May cause respiratory irritation. May cause respiratory irritation.
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: Causes serious eye irritation.
Symptoms/injuries after ingestion	: May be harmful if swallowed.

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.
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LC50 fish 1	14200 mg/l Pimephales promelas (fathead minnow) - 96 h
EC50 Daphnia 1	5012 mg/l Ceriodaphnia dubia (Water flea) - 48 h
EC50 other aquatic organisms 1	275 mg/l Chlorella vulgaris (Fresh water algae) - 72 h (OECD method 201)
NOEC (acute)	9.6 mg/l Daphnia magna (Water flea) - 9 d

ETHANOL UNLABELED (64-17-5)	
LC50 fish 1	14200 mg/l Pimephales promelas (fathead minnow) - 96 h
EC50 Daphnia 1	5012 mg/l Ceriodaphnia dubia (Water flea) - 48 h
EC50 other aquatic organisms 1	275 mg/l Chlorella vulgaris (Fresh water algae) - 72 h (OECD method 201)
NOEC (acute)	9.6 mg/l Daphnia magna (Water flea) - 9 d

12.2. Persistence and degradability

VITAMIN D2 SULFATE, SODIUM SALT 97% CP (6,19,19-D3, 98%) 100 UG/ML IN ETHANOL	
Persistence and degradability	Readily biodegradable.
BOD (% of ThOD)	95 % ThOD

ETHANOL UNLABELED (64-17-5)	
Persistence and degradability	Readily biodegradable.
BOD (% of ThOD)	95 % ThOD

12.3. Bioaccumulative potential

VITAMIN D2 SULFATE, SODIUM SALT 97% CP (6,19,19-D3, 98%) 100 UG/ML IN ETHANOL	
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.

ETHANOL UNLABELED (64-17-5)	
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

VITAMIN D2 SULFATE, SODIUM SALT 97% CP (6,19,19-D3, 98%) 100 UG/ML IN ETHANOL	
PBT: not yet assessed	

ETHANOL UNLABELED (64-17-5)	
PBT: not yet assessed	

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.
- 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)	: 1170
DOT NA no.	UN1170

14.2. UN proper shipping name

Proper Shipping Name (DOT)	: Ethanol
Class (DOT)	: 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

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Hazard labels (DOT) : 3 - 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..... 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) : 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.

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 : An orange rectangular plate with a black border. The number "33" is written in black in the upper half, and the code "1170" is written in black in the lower half.

Tunnel restriction code (ADR) : D/E

Limited quantities (ADR) : 1l

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) : 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.

VITAMIN D2 SULFATE, SODIUM SALT 97% CP (6,19,19-D3, 98%) 100 UG/ML IN ETHANOL

DLM-10478-C

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

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

VITAMIN D2 SULFATE, SODIUM SALT 97% CP (6,19,19-D3, 98%) 100 UG/ML IN ETHANOL

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 Immediate (acute) health hazard Delayed (chronic) health hazard
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313

ETHANOL UNLABELED (64-17-5)

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 Immediate (acute) health hazard Delayed (chronic) health hazard
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313

VITAMIN D2 SULFATE, SODIUM SALT 97% CP (6,19,19-D3, 98%) (1784-46-9 (Unlabeled))

Listed on the United States SARA Section 302	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard 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

VITAMIN D2 SULFATE, SODIUM SALT 97% CP (6,19,19-D3, 98%) 100 UG/ML IN ETHANOL

Listed on the Canadian DSL (Domestic Substances List)

VITAMIN D2 SULFATE, SODIUM SALT 97% CP (6,19,19-D3, 98%) (1784-46-9 (Unlabeled))

Listed on the Canadian DSL (Domestic Substances List)

15.2.1. National regulations

No additional information available

15.3. US State regulations

VITAMIN D2 SULFATE, SODIUM SALT 97% CP (6,19,19-D3, 98%) 100 UG/ML IN ETHANOL()

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	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

ETHANOL UNLABELED (64-17-5)

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	

VITAMIN D2 SULFATE, SODIUM SALT 97% CP (6,19,19-D3, 98%) (1784-46-9 (Unlabeled))

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	

VITAMIN D2 SULFATE, SODIUM SALT 97% CP (6,19,19-D3, 98%) 100 UG/ML IN ETHANOL

DLM-10478-C

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

ETHANOL UNLABELED (64-17-5)

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

VITAMIN D2 SULFATE, SODIUM SALT 97% CP (6,19,19-D3, 98%) (1784-46-9 (Unlabeled))

State or local regulations

U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Massachusetts - Right To Know 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.

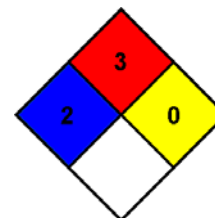
Full text of R-, H- and EUH-phrases:

Acute Tox. 1 (Inhalation)	Acute toxicity (inhalation) Category 1
Acute Tox. 3 (Dermal)	Acute toxicity (dermal) Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
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 RE 1	Specific target organ toxicity (repeated exposure) Category 1
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H225	Highly flammable liquid and vapor
H301	Toxic if swallowed
H311	Toxic in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H330	Fatal if inhaled
H335	May cause respiratory irritation
H372	Causes damage to organs through prolonged or repeated exposure
R11	Highly flammable
R26	Very toxic by inhalation
R36/37/38	Irritating to eyes, respiratory system and skin
R48/24/25	Toxic: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed
F	Highly flammable
T	Toxic
T+	Very toxic
Xi	Irritant

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