

Safety Data Sheet

Material Name: Vitamin D3-[d6] Certimass Solution; 维生素 D3-[d6]
CertiMass 溶液
Revision date: 2023-01-03

Compliant with GB/T 16483 and
GB/T 17519
SDS ID: 1822 (CHINA)-I
Version 1.0

Section 1 - PRODUCT AND COMPANY IDENTIFICATION**Product identifier****Material Name**

Vitamin D3-[d6] Certimass Solution; 维生素 D3-[d6] CertiMass 溶液

Product Code

S15008

Details of the supplier of the safety data sheet

当地信息 (Local information) :

艾微美科材国际贸易(上海)有限公司

ATMI International Trading Co,LTD

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应急电话 :

Emergency Call:

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4001-204937 (ChemTrec 中国)

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E-mail: Product.stewardship@entegris.com

Product Use

FOR LAB USE ONLY

Restrictions on Use

R&D Use Only.

Section 2 - HAZARDS IDENTIFICATION**Emergency Overview**

Colorless liquid. Highly flammable liquid and vapor. Toxic to aquatic life.

GHS hazard classification (according to GB 30000.2-GB 30000.29)

Flammable Liquids - Category 2

Hazardous to the Aquatic Environment - Acute - Category 2

Label elements**Symbol(s)****Signal word**

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Danger

Hazard Statement(s)

Highly flammable liquid and vapor.

Toxic to aquatic life.

Precautionary statements

Prevention

Keep away from heat/sparks/open flame/hot surfaces - No smoking.

Keep container tightly closed.

Ground/Bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting equipment.

Take precautionary measures against static discharge.

Use only non-sparking tools.

Wear protective gloves and eye/face protection.

Avoid release to the environment.

Response

In case of fire: Use appropriate media to extinguish.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

Storage

Store in a well-ventilated place. Keep cool.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Statement(s) of Unknown Aquatic Toxicity

0.1266% of the mixture consists of ingredient(s) of unknown acute aquatic toxicity.

Physical and Chemical Hazards

Highly flammable liquid and vapor.

Health Hazards

No data available

Potential Environmental Effects

Toxic to aquatic life.

Other Hazards Which Do Not Result in Classification

None known

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
64-17-5	Ethyl alcohol	99.823-99.987
118584-54-6	Vitamin D3-[d6]	0.013-0.127

Section 4 - FIRST AID MEASURES

Description of Necessary Measures

Inhalation

If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.

Skin contact

Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing before reuse.

Eye contact

Flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Then get immediate medical attention.

Ingestion

If swallowed, get medical attention.

Most Important Symptoms/Effects

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No information on significant adverse effects.

Delayed

No information on significant adverse effects.

Protection of first-aiders

Wear suitable protective clothing. Perform first aid measures in a safe area.

Note to Physicians

No data available

Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively.

Section 5 - FIRE FIGHTING MEASURES**Suitable extinguishing media**

regular dry chemical, carbon dioxide, water spray, alcohol resistant foam. Large fires: water spray or fog, alcohol resistant foam

Unsuitable Extinguishing Media

high-pressure water streams

Specific hazards arising from the chemical

Highly flammable liquid and vapor. Vapor/air mixtures are explosive. Vapors or gases may ignite at distant ignition sources and flash back.

Hazardous combustion products

oxides of carbon

Fire Fighting Measures

Move container from fire area if it can be done without risk. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Do not scatter spilled material with high-pressure water streams. Cool containers with water spray until well after the fire is out. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. ALWAYS stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible withdraw from area and let fire burn. Avoid inhalation of material or combustion by-products.

Protective Equipment and Precautions for Firefighters

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

Section 6 - ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

Wear personal protective clothing and equipment.

Environmental precautions

Avoid release to the environment.

Methods and Materials for Containment and Cleaning Up

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Stop leak if possible without personal risk. Prevent entry into waterways, sewers, basements, or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb with earth, sand or other non-combustible material and transfer to container. Use non-sparking tools during clean-up. Large spills: Dike for later disposal.

Secondary disaster prevention measures

No data available

Section 7 - HANDLING AND STORAGE**Precautions for safe handling**

Keep away from heat/sparks/open flame/hot surfaces - No smoking. Keep container tightly closed. Ground/Bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves and eye/face protection.

Conditions for safe storage, including any incompatibilities

Store in a well-ventilated place. Keep cool.

Store and handle in accordance with all current regulations and standards. Protect from physical damage. Keep away from heat, sparks, and flames. Grounding and bonding required. Keep separated from incompatible substances.

Incompatible Materials

acids, bases, combustible materials, halocarbons, halogens, metal oxides, metal salts, metals, oxidizing materials, peroxides

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component Exposure Limits

Ethyl alcohol	64-17-5
ACGIH:	1000 ppm STEL
Hong Kong:	1000 ppm TWA ; 1880 mg/m3 TWA

Biological limit value

There are no biological limit values for any of this product's components.

Appropriate engineering controls

Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

Personal protective equipment

Respiratory Protection

Any air-purifying half-mask respirator equipped with organic vapor cartridge(s).

Hand protection

Wear appropriate chemical resistant gloves; NBR (Nitrile rubber).

Eye/face protection

Wear safety glasses with side shields. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin and Body Protection

Wear appropriate chemical resistant clothing; lab coat. Wear puncture-resistant shoes.

Protective Materials

Recommendations are based on the product type. Consult with an industrial hygienist to determine the appropriate PPE for your specific use of this material.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colorless liquid	Physical State	liquid
Odor	sweet, alcohol-like	Color	colorless
Odor Threshold	Not available	pH	Not available
Melting Point	Not available	Boiling Point	78.37 °C
Boiling Point Range	Not available	Freezing point	Not available
Evaporation Rate	Not available	Flammability (solid, gas)	Not applicable
Autoignition Temperature	Not available	Flash Point	13 °C
Lower Explosive Limit	Not available	Decomposition temperature	Not available

Upper Explosive Limit	Not available	Vapor Pressure	Not available
Vapor Density (air=1)	Not available	Specific Gravity (water=1)	0.785
Water Solubility	Not available	Partition coefficient: n-octanol/water	Not available
Viscosity	Not available	Kinematic viscosity	Not available
Solubility (Other)	Not available	Density	0.785 g/mL
Physical Form	liquid	Molecular Formula	C27[2H6]H38O
Molecular Weight	390.67 (g/mol)		

Section 10 - STABILITY AND REACTIVITY

Chemical stability

Stable at normal temperatures and pressure.

Possibility of hazardous reactions

No reactivity hazard is expected.

Polymerization

Will not polymerize.

Conditions to avoid

Avoid heat, flames, sparks and other sources of ignition. Containers may rupture or explode if exposed to heat. Avoid contact with incompatible materials.

Materials to Avoid (Incompatibilities)

acids, bases, combustible materials, halocarbons, halogens, metal oxides, metal salts, metals, oxidizing materials, peroxides

Hazardous decomposition products

Thermal decomposition products

oxides of carbon

Section 11 - TOXICOLOGICAL INFORMATION

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Ethyl alcohol (64-17-5)

Oral LD50 Rat 7060 mg/kg

Inhalation LC50 Rat 116.9 mg/L 4 h (males)

Acute Toxicity Estimate

Inhalation - Vapor	> 50 mg/L
Oral	> 5000 mg/kg

Immediate Effects

No information on significant adverse effects.

Delayed Effects

No information on significant adverse effects.

Skin Corrosion/Irritation

No information on significant adverse effects.

Severe Damage/Irritation of Eyes

No information on significant adverse effects.

Respiratory Sensitization

No data available.

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Dermal Sensitization

No data available.

Germ cell mutagenicity

No data available for the mixture.

Component Carcinogenicity

Ethyl alcohol	64-17-5
ACGIH:	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

Reproductive Effects

No data available for the mixture.

Teratogenicity

No data available for the mixture.

Specific Target Organ Toxicity - Single Exposure

No target organs identified.

Specific Target Organ Toxicity - Repeated Exposure

No target organs identified.

Aspiration hazard

No data available.

Medical Conditions Aggravated by Exposure

None known.

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life.

Component Analysis - Aquatic Toxicity

Ethyl alcohol	64-17-5
Fish:	LC50 96 h Oncorhynchus mykiss 12 - 16 mL/L [static]; LC50 96 h Pimephales promelas >100 mg/L [static]; LC50 96 h Pimephales promelas 13400 - 15100 mg/L [flow-through]
Invertebrate:	LC50 48 h Daphnia magna 9268 - 14221 mg/L IUCLID ; EC50 48 h Daphnia magna 2 mg/L [Static] EPA

Persistence

No data available.

Bioaccumulative potential

No data available.

Mobility in Environmental Media

No data available.

Other adverse effects

No data available.

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose in accordance with all applicable regulations.

Component waste information

There is no applicable waste information for this product's components.

Contaminated packaging disposal

Dispose in accordance with all applicable regulations.

Section 14 - TRANSPORT INFORMATION

IATA Information:

Shipping Name: ETHANOL , Solution

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Hazard Class: 3
UN#: UN1170
Packing Group: II
Required Label(s): 3
Marine pollutant: No

IMDG Information:
Shipping Name: ETHANOL , Solution
Hazard Class: 3
UN#: UN1170
Packing Group: II
Required Label(s): 3
Marine pollutant: No

ICAO Information:
Shipping Name: ETHANOL , Solution
Hazard Class: 3
UN#: UN1170
Packing Group: II
Required Label(s): 3
Marine pollutant: No

International Bulk Chemical Code

This material does not contain any chemicals required by the IBC Code to be identified as dangerous chemicals in bulk.

Special precautions
 None

Section 15 - REGULATORY INFORMATION

China Regulations

Law of the People's Republic of China on Prevention and Control of Occupational Diseases: Catalogue of Occupational Hazard Factors

None of this product's components are on the list.

State Administration of Work Safety (SAWS) - List of Dangerous Chemicals

Ethyl alcohol	64-17-5
	Present (anhydrous)

List of Dangerous Chemicals for Priority Management

None of this product's components are on the list.

Dangerous Goods List (GB 12268-2012)

Ethyl alcohol	64-17-5
	Present

Regulation of Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals: Catalog of Toxic Chemicals Severely Restricted From Import and Export

Ethyl alcohol	64-17-5
Catalogue of Specially Controlled Hazardous Chemicals (First Edition)	Flammable liquid highly flammable liquid, vapor can form an explosive mixture with air

Hazardous Chemicals Control Ordinance (HongKong)

None of this product's components are on the list.

Controlled Chemicals Schedule (HongKong)

None of this product's components are on the list.

Information on International Conventions and Agreements

The Montreal Protocol on Substances that Deplete the Ozone Layer

Montreal Protocol

No components of this material are listed.

UNEP - Stockholm Convention - Persistent Organic Pollutants (POPs)

Stockholm Convention

No components of this material are listed.

UN/FAO/Rotterdam Convention - Chemicals Subject to Prior Informed Consent (PIC)

No components of this material are listed.

Component Analysis - Inventory

Ethyl alcohol (64-17-5)

US	CA	AU	CN	EU	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2
Yes	DSL	Yes	Yes	EIN	Yes	Yes	Yes	No

KR - REACH CCA	MX	NZ	PH	TH-TECI	TW, CN	VN (Draft)
No	Yes	Yes	Yes	Yes	Yes	Yes

Vitamin D3-[d6] (118584-54-6)

US	CA	AU	CN	EU	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2
No	No	No	No	No	No	No	No	No

KR - REACH CCA	MX	NZ	PH	TH-TECI	TW, CN	VN (Draft)
No	No	No	No	No	No	No

Section 16 - OTHER INFORMATION

NFPA Ratings

Health: 2 Fire: 3 Instability: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Preparation Date

1/3/2023

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CA/MA/MN/NJ/PA - California/Massachusetts/Minnesota/New Jersey/Pennsylvania*; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CFR - Code of Federal Regulations (US); CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EC - European Commission; EEC - European Economic Community; EIN - European Inventory of (Existing Commercial Chemical Substances); EINECS - European Inventory of Existing Commercial Chemical Substances; ENCS - Japan Existing and New Chemical Substance Inventory; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; F - Background (for Venezuela Biological Exposure Indices); IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG -

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International Maritime Dangerous Goods; ISHL - Japan Industrial Safety and Health Law; IUCLID - International Uniform Chemical Information Database; JP - Japan; Kow - Octanol/water partition coefficient; KR KECI Annex 1 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL); KR KECI Annex 2 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL), KR - Korea; LD50/LC50 - Lethal Dose/Lethal Concentration; KR REACH CCA - Korea Registration and Evaluation of Chemical Substances Chemical Control Act; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; MX - Mexico; Ne-Non-specific; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; Nq - Non-quantitative; NSL - Non-Domestic Substance List (Canada); NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PEL- Permissible Exposure Limit; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; Sc - Semi-quantitative; STEL - Short-term Exposure Limit; TCCA - Korea Toxic Chemicals Control Act; TDG - Transportation of Dangerous Goods; TH-TECI - Thailand - FDA Existing Chemicals Inventory (TECI); TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act; TW - Taiwan; TWA - Time Weighted Average; UEL - Upper Explosive Limit; UN/NA - United Nations /North American; US - United States; VLE - Exposure Limit Value (Mexico); VN (Draft) - Vietnam (Draft); WHMIS - Workplace Hazardous Materials Information System (Canada).

Training advice

Available upon request

Key literature references and sources for data

Available upon request

Other Information**Disclaimer:**

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