

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)  
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

Entegris (Shanghai)  
Microelectronics Trading Co., Ltd. (Shanghai Office)  
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Zhangjiang Hi-Tech Park, Shanghai 201203, P.R. of China  
Telephone: +86 21 8023 6500  
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#### Emergency Call ( 应急电话) :

86-532-83889090 ( 中国, 24小时应急电话)

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

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****Immediate**

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**

<b>Appearance</b>	Colorless liquid	<b>Physical State</b>	liquid
<b>Odor</b>	sweet, alcohol-like	<b>Color</b>	colorless
<b>Odor Threshold</b>	Not available	<b>pH</b>	Not available
<b>Melting Point</b>	Not available	<b>Boiling Point</b>	78.37 °C
<b>Boiling Point Range</b>	Not available	<b>Freezing point</b>	Not available
<b>Evaporation Rate</b>	Not available	<b>Flammability (solid, gas)</b>	Not applicable
<b>Autoignition Temperature</b>	Not available	<b>Flash Point</b>	13 °C
<b>Lower Explosive Limit</b>	Not available	<b>Decomposition temperature</b>	Not available
<b>Upper Explosive Limit</b>	Not available	<b>Vapor Pressure</b>	Not available
<b>Vapor Density (air=1)</b>	Not available	<b>Specific Gravity (water=1)</b>	0.785

<b>Water Solubility</b>	Not available	<b>Partition coefficient: n-octanol/water</b>	Not available
<b>Viscosity</b>	Not available	<b>Kinematic viscosity</b>	Not available
<b>Solubility (Other)</b>	Not available	<b>Density</b>	0.785 g/mL
<b>Physical Form</b>	liquid	<b>Molecular Formula</b>	C27[2H6]H38O
<b>Molecular Weight</b>	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.

**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

**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 - 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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