

## Chemical Safety Data Sheet MSDS / SDS

**9(R)-HODE CHOLESTERYL ESTER**

Revision Date:2026-05-31 Revision Number:1

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

Product name : 9(R)-HODE CHOLESTERYL ESTER  
CBnumber : CB0471781  
CAS : 330800-93-6  
Synonyms : ALWABJCAEDQEGO-DXCNXAGRSA-N;9R-HYDROXY-10E,12Z-OCTADECADIENOIC ACID,  
CHOLESTERYL ESTER

**Relevant identified uses of the substance or mixture and uses advised against**

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.  
Uses advised against : none

**Company Identification**

Company : Chemicalbook  
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing  
Telephone : 010-86108875

**SECTION 2: Hazards identification****GHS Label elements, including precautionary statements**

Symbol(GHS)



Signal word

Danger

**Precautionary statements**

P501 Dispose of contents/container to....  
P403+P235 Store in a well-ventilated place. Keep cool.  
P370+P378 In case of fire: Use ... for extinction.  
P337+P313 IF eye irritation persists: Get medical advice/attention.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
Continuerinsing.  
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P264 Wash skin thoroughly after handling.  
P243 Take precautionary measures against static discharge.

P242 Use only non-sparking tools.

P241 Use explosion-proof electrical/ventilating/lighting/.../equipment.

P240 Ground/bond container and receiving equipment.

P233 Keep container tightly closed.

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

#### **Hazard statements**

H319 Causes serious eye irritation

H225 Highly Flammable liquid and vapour

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## **SECTION 3: Composition/information on ingredients**

### **Substance**

|              |                                                                                             |
|--------------|---------------------------------------------------------------------------------------------|
| Product name | : 9(R)-HODE CHOLESTERYL ESTER                                                               |
| Synonyms     | : ALWABJCAEDQEGO-DXCNXAGRSA-N;9R-HYDROXY-10E,12Z-OCTADECADIENOIC ACID,<br>CHOLESTERYL ESTER |
| CAS          | : 330800-93-6                                                                               |
| MF           | : C45H76O3                                                                                  |
| MW           | : 665.08                                                                                    |

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## **SECTION 4: First aid measures**

### **Description of first aid measures**

#### **General information**

Immediately remove any clothing soiled by the product.

#### **After inhalation**

Supply fresh air; consult doctor in case of complaints.

#### **After skin contact**

Immediately rinse with water.

#### **After eye contact**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

#### **After swallowing**

If symptoms persist consult doctor.

#### **Most important symptoms and effects, both acute and delayed**

No further relevant information available.

#### **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

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## SECTION 5: Firefighting measures

### Extinguishing media

#### Suitable extinguishing agents

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

#### Special hazards arising from the substance or mixture

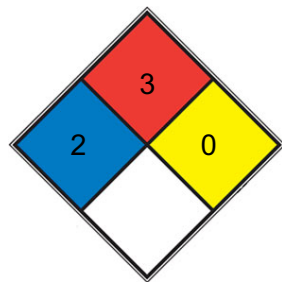
No further relevant information available.

#### Advice for firefighters

#### Protective equipment

No special measures required.

#### NFPA 704



☒ HEALTH 2 Intense or continued but not chronic exposure could cause temporary incapacitation or possible residual injury (e.g. [diethyl ether](#), ammonium phosphate, iodine)

☒ FIRE 3 Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions . Liquids having a flash point below 22.8 °C (73 °F) and having a boiling point at or above 37.8 °C (100 °F) or having a flash point between 22.8 and 37.8 °C (73 and 100 °F). (e.g. gasoline, [acetone](#))

☒ REACT 0 Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, [N<sub>2</sub>](#))

☐ SPEC.

☐ HAZ.

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## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

### Environmental precautions

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

### Methods and material for containment and cleaning up

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to section 13.

Ensure adequate ventilation.

### **Protective Action Criteria for Chemicals**

#### **PAC-1**

64-17-5 ethanol 1,800 ppm

#### **PAC-2**

64-17-5 ethanol 3300\* ppm

#### **PAC-3**

64-17-5 ethanol 15000\* ppm

### **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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## **SECTION 7: Handling and storage**

### **Precautions for safe handling**

No special precautions are necessary if used correctly.

Avoid breathing dust/fume/gas/mist/vapours/spray.

Avoid prolonged or repeated exposure.

Keep away from sources of ignition.

Take precautionary measures against static discharge.

### **Information about protection against explosions and fires**

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

### **Conditions for safe storage, including any incompatibilities**

#### **Storage**

Store in accordance with information listed on the product insert.

### **Requirements to be met by storerooms and receptacles**

Store in a cool location.

### **Information about storage in one common storage facility**

Not required.

### **Further information about storage conditions**

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

### Specific end use(s)

No further relevant information available.

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## SECTION 8: Exposure controls/personal protection

### Control parameters

Components with limit values that require monitoring at the workplace:

| 64-17-5 ethanol |                                                     |
|-----------------|-----------------------------------------------------|
| PEL             | Long-term value: 1900 mg/m <sup>3</sup> , 1000 ppm  |
| REL             | Long-term value: 1900 mg/m <sup>3</sup> , 1000 ppm  |
| TLV             | Short-term value: 1880 mg/m <sup>3</sup> , 1000 ppm |
| A3              |                                                     |

### Additional information

The lists that were valid during the creation were used as basis.

### Exposure controls

#### Appropriate engineering controls

No further data; see section 7.

#### Personal protective equipment

#### General protective and hygienic measures

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

#### Breathing equipment

Not required.

#### Protection of hands

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

#### Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

### **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

### **Eye protection**

Tightly sealed goggles

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## **SECTION 9: Physical and chemical properties**

### **Information on basic physicochemical properties**

#### **Physical State**

Liquid

#### **Color**

According to product specification

#### **Odor**

Alcohol-like

#### **Structural Formula**

C<sub>45</sub>H<sub>76</sub>O<sub>3</sub>

#### **Molecular Weight**

665.1 g/mol

#### **Storage Buffer**

#### **Odor Threshold**

Not determined.

#### **Formulation**

A solution in ethanol

#### **Melting point/Melting range**

-114 °C (-173.2 °F)

#### **Boiling point/Boiling range**

78 °C (172.4 °F)

#### **Flammability**

Highly flammable.

**Explosion limits**

Lower: 3.3 Vol %

Upper: 19 Vol %

**Flash point**

13 °C (55.4 °F)

**Auto igniting**

425 °C (797 °F)

**Decomposition temperature**

Not determined.

**pH**

Not determined.

**Viscosity****Kinematic**

Not determined.

**SOLUBILITY**

DMF: >50 mg/ml; DMSO: >50 mg/ml; Ethanol: >50 mg/ml; Ethanol:PBS (1:10): <10 µg/ml

**Dynamic**

at 20 °C (68 °F): 1.2 mPas

**Solubility in / Miscibility with**

DMF: >50 mg/ml; DMSO: >50 mg/ml; Ethanol: >50 mg/ml; Ethanol:PBS (1:10): <10 µg/ml

**Water at 20 °C (68 °F)**

1,000 g/l

**Partition coefficient (n-octanol/water)**

Not determined.

**Vapor Pressure at 20 °C (68 °F)**

59 hPa (44.3 mm Hg)

**Vapor Pressure at 50 °C (122 °F)**

280 hPa (210 mm Hg)

**Density at 20 °C (68 °F)**

0.79 g/cm<sup>3</sup> (6.59255 lbs/gal)

**Relative Density**

0.99±0.1 g/cm<sup>3</sup>(Predicted)

### **Vapor Density**

Not determined.

### **Particle characteristics**

Not applicable.

### **Other information**

### **Appearance**

### **Form**

Liquid

### **Important information on protection of health and environment, and on safety.**

### **Ignition temperature**

Product is not selfigniting.

### **Danger of explosion**

Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

### **Organic solvents**

100.0 %

### **VOC content**

99.99 % 999.9 g/l / 8.34 lb/gal

### **Solids content**

0.0 %

### **Change in condition**

### **Evaporation Rate**

Not determined.

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## **SECTION 10: Stability and reactivity**

### **Reactivity**

No further relevant information available.

### **Chemical stability**

### **Thermal decomposition / conditions to be avoided**

No decomposition if used according to specifications.



### Possibility of hazardous reactions

No dangerous reactions known.

### Conditions to avoid

No further relevant information available.

### Incompatible materials

strong oxidizing agents

### Hazardous decomposition products

carbon dioxide, carbon monoxide

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## SECTION 11: Toxicological information

### Information on toxicological effects

#### Acute toxicity

LD/LC50 values that are relevant for classification:

| Substance / Estimate | Route      | Endpoint | Value                                         |
|----------------------|------------|----------|-----------------------------------------------|
| 64-17-5 ethanol      | Oral       | LD50     | 10,470 mg/kg (rat)<br>OECD Test Guideline 401 |
| 64-17-5 ethanol      | Inhalative | LC50/4 h | 117–125 mg/l (rat)<br>OECD 403 (rat)          |

#### Primary irritant effect

##### on the skin

No irritant effect.

##### on the eye

Irritating effect.

#### Sensitization

No sensitizing effects known.

### Additional toxicological information

The product shows the following dangers according to internally approved calculation methods for preparations

Irritant

#### Interactive effects

No interactive effects between components are known.

#### Carcinogenic categories

## **IARC (International Agency for Research on Cancer)**

64-17-5 ethanol 1

## **NTP (National Toxicology Program)**

None of the ingredients is listed.

## **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

## **Alternative sources for toxicological information**

No non-standard sources for toxicological information were used.

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# **SECTION 12: Ecological information**

## **Toxicity**

### **Aquatic toxicity**

No further relevant information available.

### **Persistence and degradability**

No further relevant information available.

### **Bioaccumulative potential**

No further relevant information available.

### **Mobility in soil**

No further relevant information available.

## **Results of PBT and vPvB assessment**

### **PBT**

Not applicable.

### **vPvB**

Not applicable.

### **PBT:**

Not applicable.

### **vPvB:**

Not applicable.

## **Other adverse effects**

## **Additional ecological information**

## General notes

Water hazard class 1 (Self-assessment) slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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## SECTION 13: Disposal considerations

### Waste treatment methods

#### Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

### Uncleaned packagings

#### Recommendation

Disposal must be made according to official regulations.

### Recommended cleansing agent

Water, if necessary with cleansing agents.

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## SECTION 14: Transport information

### UN-Number

DOT, IMDG, IATA UN1170

### UN proper shipping name

DOT Ethanol solutions

IMDG ETHANOL SOLUTION (ETHYL ALCOHOL  
SOLUTION)

IATA Ethanol solution

### Transport hazard class(es)

#### DOT

Class: 3 Flammable liquids

Label: 3

#### IMDG, IATA

Class: 3 Flammable liquids

Label: 3

### Packing group

DOT, IMDG, IATA II

### Environmental hazards

Not applicable.

## **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

## **Transport/Additional information**

### **DOT:**

### **Quantity limitations**

On passenger aircraft/rail: 5 L

On cargo aircraft only: 60 L

### **IMDG:**

### **Limited quantities (LQ)**

1L

### **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

### **IATA:**

### **Remarks**

When sold in quantities of less than or equal to 1 mL, or 1 g, with an Excepted Quantity Code of

E1, E2, E4, or E5, this item meets the De Minimis

Quantities exemption, per IATA 2.6.10.

Therefore packaging does not have to be labeled as

Dangerous Goods/Excepted Quantity.

### **Special precautions for user**

Warning: Flammable liquids

### **Hazard identification number (Kemler code)**

33

### **EMS Number**

F-E, S-D

### **Stowage Category**

A

### **UN "Model Regulation"**

UN 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3, II

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## SECTION 15: Regulatory information

### Safety, health and environmental regulations/legislation specific for the substance or mixture

No further relevant information available.

#### Sara

|                                                             |                                    |
|-------------------------------------------------------------|------------------------------------|
| Section 355 (extremely hazardous substances):               | None of the ingredients is listed. |
| Section 313 (Specific toxic chemical listings):             | None of the ingredients is listed. |
| TSCA (Toxic Substances Control Act):                        | 64-17-5 ethanol ACTIVE             |
| Hazardous Air Pollutants:                                   | None of the ingredients is listed. |
| Chemicals known to cause cancer:                            | None of the ingredients is listed. |
| Chemicals known to cause reproductive toxicity for females: | None of the ingredients is listed. |
| Chemicals known to cause reproductive toxicity for males:   | None of the ingredients is listed. |
| Chemicals known to cause developmental toxicity:            | 64-17-5 ethanol                    |

#### Carcinogenic categories

|                                                                   |                                    |
|-------------------------------------------------------------------|------------------------------------|
| EPA (Environmental Protection Agency):                            | None of the ingredients is listed. |
| TLV (Threshold Limit Value):                                      | 64-17-5 ethanol A3                 |
| NIOSH-Ca (National Institute for Occupational Safety and Health): | None of the ingredients is listed. |

#### Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

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## SECTION 16: Other information

### Abbreviations and acronyms

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Flammable liquids 2: Flammable liquids – Category 2

Eye irritation 2A: Serious eye damage/eye irritation – Category 2A

**Disclaimer:**

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.