

## Chemical Safety Data Sheet MSDS / SDS

**(Z)-7-[(1R)-3 $\alpha$ ,5 $\alpha$ -Dihydroxy-2 $\beta$ -[(E,R)-3-hydroxy-4-[3-(trifluoromethyl)phenoxy]-1-butenyl]cyclopentan-1 $\alpha$ -yl]-5-heptenoic acid methyl 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 : (Z)-7-[(1R)-3 $\alpha$ ,5 $\alpha$ -Dihydroxy-2 $\beta$ -[(E,R)-3-hydroxy-4-[3-(trifluoromethyl)phenoxy]-1-butenyl]cyclopentan-1 $\alpha$ -yl]-5-heptenoic acid methyl ester

CBnumber : CB42397809

CAS : 73275-76-0

Synonyms : (+)-fluprostenol methyl 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**

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

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

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

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P264 Wash skin thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continuerinsing.

P337+P313 IF eye irritation persists: Get medical advice/attention.

P370+P378 In case of fire: Use ... for extinction.

P403+P235 Store in a well-ventilated place. Keep cool.

P501 Dispose of contents/container to.....

#### **Hazard statements**

H225 Highly Flammable liquid and vapour

H319 Causes serious eye irritation

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## SECTION 3: Composition/information on ingredients

### **Substance**

Product name	: (Z)-7-[(1R)-3 $\alpha$ ,5 $\alpha$ -Dihydroxy-2 $\beta$ -[(E,R)-3-hydroxy-4-[3-(trifluoromethyl)phenoxy]-1-butenyl]cyclopentan-1 $\alpha$ -yl]-5-heptenoic acid methyl ester
Synonyms	: (+)-fluprostenol methyl ester
CAS	: 73275-76-0
MF	: C24H31F3O6
MW	: 472.49

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## SECTION 4: First aid measures

### **First Aid Measures**

#### **General advice**

Immediate medical attention is required. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

#### **Eye contact**

Wash with plenty of water.

#### **Skin Contact**

Wash off immediately with plenty of water.

#### **Inhalation**

Remove to fresh air If breathing is difficult, give oxygen If not breathing, give artificial respiration

#### **Ingestion**

Never give anything by mouth to an unconscious person. Clean mouth with water.

#### **Self-protection of the first aider**

Remove all sources of ignition.

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

#### **Symptoms**

No information available.

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

### Note to physicians

Treat symptomatically.

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## SECTION 5: Firefighting measures

### Suitable Extinguishing Media

#### Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

#### Unsuitable Extinguishing Media

No information available.

### Specific hazards arising from the chemical

#### Specific hazards arising from the chemical

flammable.

#### Hazardous combustion products

Hydrogen fluoride. Carbon oxides.

### Explosion data

#### Sensitivity to Mechanical Impact

No information available.

#### Sensitivity to Static Discharge

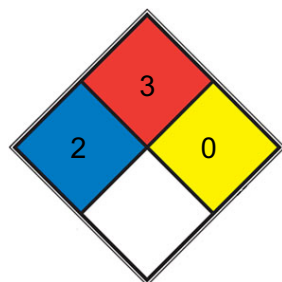
No information available.

### Protective equipment and precautions for firefighters

#### Protective equipment and precautions for firefighters

As in any fire, wear self contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### 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

#### Personal precautions

Remove all sources of ignition. Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required.

#### Environmental precautions

##### Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

See Section 12 for additional Ecological Information. Do not flush into surface water or sanitary sewer system.

### Methods and material for containment and cleaning up

#### Methods for containment

Prevent further leakage or spillage if safe to do so.

#### Methods for cleaning up

Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Pick up and transfer to properly labeled containers. Soak up with inert absorbent material.

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## SECTION 7: Handling and storage

### Precautions for safe handling

#### Advice on safe handling

Ensure adequate ventilation, especially in confined areas. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity).

Take precautionary measures against static discharges. Use spark-proof tools and explosion-proof equipment. All equipment used when handling the product must be grounded.

### Conditions for safe storage, including any incompatibilities

#### Storage Conditions

Keep tightly closed in a dry and cool place. Keep in properly labeled containers. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Store at -20 °C.

#### Incompatible materials

None known based on information supplied.

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## SECTION 8: Exposure controls/personal protection

### Control parameters

#### Exposure Guidelines

## Other Information

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Column 1	Column 2	Column 3	Column 4
Ethanol 64-17-5	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m <sup>3</sup> (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m <sup>3</sup>	IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m <sup>3</sup>

NIOSH IDLH Immediately Dangerous to Life or Health

## Appropriate engineering controls

### Engineering Controls

Showers  
Eyewash stations  
Ventilation systems

## Individual protection measures, such as personal protective equipment

### Eye/face protection

Wear safety glasses with side shields (or goggles).

### Skin and Body Protection

Wear protective gloves and protective clothing.

### Respiratory protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

### General Hygiene Considerations

When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended.

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

Physical State	liquid
Appearance	No information available
Odor	No information available
pH	No information available
Melting point/freezing point	No information available
Boiling point	78 °C
Flash point	14 °C CC (closed cup)
Liquid Density	No information available
Evaporation rate	No information available
Upper flammability limits	19.0%
Lower flammability limit	3.3%
Vapor pressure	43 mmHg

Vapor density	No information available
Specific gravity	No information available
Water solubility	No information available
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	363 °C
Decomposition temperature	No information available
Kinematic viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available
Density and/or relative density	1.281±0.06 g/cm <sup>3</sup> (Predicted)
Solubility	DMF: 50 mg/ml; DMSO: 50 mg/ml; Ethanol: 50 mg/ml; PBS (pH 7.2): 10 mg/ml

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## SECTION 10: Stability and reactivity

### Reactivity

Not applicable

### Chemical stability

Stable under recommended storage conditions.

### Possibility of Hazardous Reactions

None under normal processing.

### Hazardous polymerization

No information available.

### Conditions to avoid

Heat, flames and sparks.

### Incompatible materials

Strong oxidizing agents.

### Hazardous Decomposition Products

Hydrogen fluoride. Carbon oxides.

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## SECTION 11: Toxicological information

### Information on likely routes of exposure

#### Inhalation

Classified based on available data. For more details, see section 2.

#### Eye contact

Classified based on available data. For more details, see section 2.

### Skin Contact

Classified based on available data. For more details, see section 2.

### Ingestion

Classified based on available data. For more details, see section 2.

### Information on toxicological effects

#### Symptoms

Classified based on available data. For more details, see section 2.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Chronic Toxicity

May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects. Contains a known or suspected reproductive toxin. Target Organ Effects Blood, Reproductive System, Central nervous system, Eyes, Respiratory system, Liver, Skin.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

### Chemical name ACGIH IARC NTP OSHA

#### Ethanol A3 Group

1 Known X 64-17-5

### Numerical measures of toxicity - Product Information

#### Unknown acute toxicity

Classified based on available data. For more details, see section 2

The following values are calculated based on chapter 3.1 of the GHS document

#### ATEmix (oral)

7131 mg/kg

#### ATEmix (inhalation-dust/mist)

126 mg/l

#### ATEmix (inhalation-vapor)

126 mg/l

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## SECTION 12: Ecological information

### Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Ethanol 64-17-5	-	12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static 13400 - 15100: 96 h Pimephales promelas mg/L LC50 flow-through 100: 96 h Pimephales promelas mg/L LC50 static	-	9268 - 14221: 48 h Daphnia magna mg/L LC50 10800: 24 h Daphnia magna mg/L EC50 2: 48 h Daphnia magna mg/L EC50 Static

1% of the mixture consists of component(s) of unknown hazards to the aquatic environment.

### Ethanol - 12.0 - 16.0: 96 h

- 9268 - 14221: 48 h Daphnia

## 96 h Pimephales promelas

EC50 2: 48 h Daphnia

**Persistence and degradability** No information available. **Bioaccumulation** No information available. **Mobility** No information available.

## Ethanol

-0.32 64-17-5

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## SECTION 13: Disposal considerations

### Disposal of wastes

This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261).

### Contaminated packaging

Do not reuse container.

### US EPA Waste Number

D001

### California Hazardous Waste Status

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical name	California Hazardous Waste Status
Ethanol 64-17-5	Toxic Ignitable

## Ethanol

Toxic

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## SECTION 14: Transport information

### DOT

#### UN/ID no

UN1170

#### Hazard Class

3

#### Packing Group

II

#### Proper shipping name

Ethanol

#### Description

UN1170, Ethanol, 3, II

**Emergency Response Guide Number**

127

**IMDG**

**UN/ID no**

UN1170

**Hazard Class**

3

**Packing Group**

II

**Proper shipping name**

Ethanol

**Description**

UN1170, Ethanol, 3, II, (14°C c.c.), Marine pollutant

**Special Provisions**

144

**EmS-No**

F-E, S-D

**IATA**

**UN/ID no**

UN1170

**Hazard Class**

3

**Packing Group**

II

**Proper shipping name**

Ethanol

**Description**

UN1170, Ethanol, 3, II

**ERG Code**

3L

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## SECTION 15: Regulatory information

### International Inventories

All of the components in the product are on the following Inventory lists

X - Listed

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

Chemical name	TSCA	DSL	NDSL	LEINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AIICS
Ethanol	X	X	-	X	-	X	X	X	X	X

## US Federal Regulations

### SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

### SARA 311/312 Hazard Categories

#### Acute health hazard

Yes

#### Chronic Health Hazard

No

#### Fire hazard

Yes

#### Sudden release of pressure hazard

No

#### Reactive hazard

No

### CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

## US State Regulations

### California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical name	California Proposition 65
Ethanol - 64-17-5	Carcinogen Developmental

### U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Ethanol 64-17-5	X	X	X

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## SECTION 16: Other information

### Abbreviations and acronyms

CAS: Chemical Abstracts Service

TWA: Time-Weighted Average

STEL: Short-Term Exposure Limit

LD50: Lethal Dose 50%

LC50: Lethal Concentration 50%

EC50: Effective Concentration 50%

PEL: Permissible Exposure Limit

TLV: Threshold Limit Value

IMDG: International Maritime Dangerous Goods Code

IATA: International Air Transport Association

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

DOT: US Department of Transportation

NFPA: National Fire Protection Association

NIOSH: National Institute for Occupational Safety and Health

OSHA: Occupational Safety and Health Administration

**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.