

ALFAAA13084

2-Ethyl-2-(hydroxymethyl)-1,3-propanediol

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

产品说明: Product Description:	2-乙基-2-(羟基甲基)-1,3-丙烷二醇 2-Ethyl-2-(hydroxymethyl)-1,3-propanediol
Cat No. :	A13084
Synonyms	1,1,1-Trimethylolpropane
CAS No	77-99-6
Molecular Formula	C6 H14 O3
Supplier	Avocado Research Chemicals Ltd. (Part of Thermo Fisher Scientific) Shore Road, Heysham Lancashire, LA3 2XY, United Kingdom Office Tel: +44 (0) 1524 850506 Office Fax: +44 (0) 1524 850608
Emergency Telephone Number	For information US call: 001-800-227-6701 / Europe call: +32 14 57 52 11 Emergency Number US :001-201-796-7100 / Europe : +32 14 57 52 99 CHEMTREC Tel. No. US :001-800-424-9300 / Europe :001-703-527-3887
E-mail address	begel.sdsdesk@thermofisher.com
Recommended Use	Laboratory chemicals.
Uses advised against	No Information available

SECTION 2. HAZARD IDENTIFICATION

Physical State Solid	Appearance White	Odor Characteristic
Emergency Overview Suspected of damaging fertility or the unborn child.		

Classification of the substance or mixture

Reproductive Toxicity	Category 2
-----------------------	------------

Label Elements



Signal Word

Warning

Hazard Statements

H361 - Suspected of damaging fertility or the unborn child

SAFETY DATA SHEET

2-Ethyl-2-(hydroxymethyl)-1,3-propanediol

Precautionary Statements

Prevention

P201 - Obtain special instructions before use

P202 - Do not handle until all safety precautions have been read and understood

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

Response

P308 + P313 - IF exposed or concerned: Get medical advice/attention

Storage

P403 - Store in a well-ventilated place

Disposal

P501 - Dispose of contents/ container to an approved waste disposal plant

Physical and Chemical Hazards

None identified.

Health Hazards

Suspected of damaging fertility or the unborn child.

Environmental hazards

Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants. . Will likely be mobile in the environment due to its water solubility. The product is water soluble, and may spread in water systems.

This product does not contain any known or suspected endocrine disruptors.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No	Weight %
1,3-Propanediol, 2-ethyl-2-(hydroxymethyl)-	77-99-6	> 95

SECTION 4. FIRST AID MEASURES

General Advice

If symptoms persist, call a physician.

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Skin Contact

Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

Inhalation

Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

Ingestion

Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.

Most important symptoms and effects

None reasonably foreseeable.

Self-Protection of the First Aider

No special precautions required.

Notes to Physician

Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Water spray. Carbon dioxide (CO₂). Dry chemical. Chemical foam.

Extinguishing media which must not be used for safety reasons

Do not use water jetstream.

Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors.

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.

SECTION 6. ACCIDENTAL RELEASE MEASURES**Personal Precautions**

Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation.

Environmental Precautions

Should not be released into the environment.

Methods for Containment and Clean Up

Sweep up and shovel into suitable containers for disposal. Keep in suitable, closed containers for disposal.

Refer to protective measures listed in Sections 8 and 13.

SECTION 7. HANDLING AND STORAGE**Handling**

Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid ingestion and inhalation. Avoid dust formation. Do not get in eyes, on skin, or on clothing.

Storage

Keep container tightly closed in a dry and well-ventilated place.

Specific Use(s)

Use in laboratories

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control Parameters****Monitoring methods**

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents. MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust

Exposure Controls**Engineering Measures**

None under normal use conditions.

Personal protective equipment**Eye Protection**

Wear safety glasses with side shields (or goggles) (European standard - EN 166)

Hand Protection

Protective gloves

SAFETY DATA SHEET

2-Ethyl-2-(hydroxymethyl)-1,3-propanediol

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Nitrile rubber Neoprene Natural rubber PVC	See manufacturers recommendations	-	EN 374	(minimum requirement)

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

Skin and body protection	Wear appropriate protective gloves and clothing to prevent skin exposure
Respiratory Protection	No protective equipment is needed under normal use conditions.
Large scale/emergency use	Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced Recommended Filter type: Particle filter
Small scale/Laboratory use	Maintain adequate ventilation

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls No information available.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White
Physical State	Solid
Odor	Characteristic
Odor Threshold	No data available
pH	4-7
Melting Point/Range	56 - 60 °C / 132.8 - 140 °F
Softening Point	No data available
Boiling Point/Range	160 °C / 320 °F
Flash Point	172 °C / 341.6 °F
Evaporation Rate	Not applicable
Flammability (solid,gas)	No information available
Explosion Limits	Lower 2 Upper 11.8
Vapor Pressure	@ <10 Pa °C 50
Vapor Density	Not applicable
Specific Gravity / Density	No data available
Bulk Density	No data available
Water Solubility	Soluble
Solubility in other solvents	No information available
Partition Coefficient (n-octanol/water)	
Component	log Pow
1,3-Propanediol,	-0.47
2-ethyl-2-(hydroxymethyl)-	
Autoignition Temperature	414 °C / 777.2 °F
Decomposition Temperature	No data available
Viscosity	Not applicable
Explosive Properties	No information available
Oxidizing Properties	No information available

SAFETY DATA SHEET

2-Ethyl-2-(hydroxymethyl)-1,3-propanediol

Molecular Formula C6 H14 O3
Molecular Weight 134.18

SECTION 10. STABILITY AND REACTIVITY

Stability No information available.

Hazardous Reactions None under normal processing.
Hazardous Polymerization No information available.

Conditions to Avoid Incompatible products.

Materials to avoid Strong oxidizing agents.

Hazardous Decomposition Products Carbon monoxide (CO). Carbon dioxide (CO₂).

SECTION 11. TOXICOLOGICAL INFORMATION

Product Information

(a) acute toxicity;

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
1,3-Propanediol, 2-ethyl-2-(hydroxymethyl)-	LD50 = 14100 mg/kg (Rat)	LD50 > 10000 mg/kg (Rabbit)	LC50 > 0.85 mg/L (Rat) 4 h

(b) skin corrosion/irritation; Based on available data, the classification criteria are not met

(c) serious eye damage/irritation; Based on available data, the classification criteria are not met

(d) respiratory or skin sensitization;
Respiratory Based on available data, the classification criteria are not met
Skin Based on available data, the classification criteria are not met

(e) germ cell mutagenicity; Based on available data, the classification criteria are not met
 Did not show mutagenic effects in animal experiments

(f) carcinogenicity; Based on available data, the classification criteria are not met
 There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; Category 2 Based on available data, the classification criteria are not met

(h) STOT-single exposure; Based on available data, the classification criteria are not met

(i) STOT-repeated exposure; Based on available data, the classification criteria are not met
Target Organs None known.

(j) aspiration hazard; Not applicable
 Solid

Other Adverse Effects The toxicological properties have not been fully investigated.

SAFETY DATA SHEET

2-Ethyl-2-(hydroxymethyl)-1,3-propanediol

Symptoms / effects, both acute and delayed No information available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity effects Do not empty into drains. .

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
1,3-Propanediol, 2-ethyl-2-(hydroxymethyl)-		EC50: 10330 - 16360 mg/L, 48h Static (Daphnia magna) EC50: = 13000 mg/L, 48h (Daphnia species)		

Persistence and Degradability Persistence Expected to be biodegradable
Persistence is unlikely.

Bioaccumulative Potential Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
1,3-Propanediol, 2-ethyl-2-(hydroxymethyl)-	-0.47	0.14 dimensionless

Mobility in soil The product is water soluble, and may spread in water systems Will likely be mobile in the environment due to its water solubility Highly mobile in soils

Endocrine Disruptor Information This product does not contain any known or suspected endocrine disruptors
Persistent Organic Pollutant This product does not contain any known or suspected substance
Ozone Depletion Potential This product does not contain any known or suspected substance

SECTION 13. DISPOSAL CONSIDERATIONS

Waste from Residues/Unused Products Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

Contaminated Packaging Dispose of this container to hazardous or special waste collection point.

Other Information Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains.

SECTION 14. TRANSPORT INFORMATION

Road and Rail Transport Not Regulated

IMDG/IMO Not regulated

IATA Not regulated

Special Precautions for User No special precautions required

SECTION 15. REGULATORY INFORMATION

SAFETY DATA SHEET

2-Ethyl-2-(hydroxymethyl)-1,3-propanediol

International Inventories

China, X = listed, Australia, U.S.A. (TSCA), Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Australia (AICS), Korea (KECL), China (IECSC), Japan (ENCS), Philippines (PICCS), Taiwan (TCSI), Japan (ISHL), New Zealand (NZIoC), Japan (ISHL).

Component	The Inventory of Hazardous Chemicals (2015 Edition)	List of dangerous goods GB 12268 - 2012	TCSI	IECSC	EINECS	TSCA	DSL	PICCS	ENCS	ISHL	AICS	KECL
1,3-Propanediol, 2-ethyl-2-(hydroxymethyl)-	-	-	X	X	201-074-9	X	X	X	X	X	X	KE-13838

National Regulations

SECTION 16. OTHER INFORMATION

Prepared By Health, Safety and Environmental Department
Creation Date 23-Aug-2011
Revision Date 25-Apr-2024
Revision Summary New emergency telephone response service provider.

Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Legend

CAS - Chemical Abstracts Service

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

PICCS - Philippines Inventory of Chemicals and Chemical Substances

IECSC - Chinese Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

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

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

ENCS - Japanese Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

WEL - Workplace Exposure Limit

ACGIH - American Conference of Governmental Industrial Hygienists

DNEL - Derived No Effect Level

RPE - Respiratory Protective Equipment

LC50 - Lethal Concentration 50%

NOEC - No Observed Effect Concentration

PBT - Persistent, Bioaccumulative, Toxic

TWA - Time Weighted Average

IARC - International Agency for Research on Cancer

PNEC - Predicted No Effect Concentration

LD50 - Lethal Dose 50%

EC50 - Effective Concentration 50%

POW - Partition coefficient Octanol:Water

vPvB - very Persistent, very Bioaccumulative

ICAO/IATA - International Civil Aviation Organization/International Air Transport Association

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road

OECD - Organisation for Economic Co-operation and Development

BCF - Bioconcentration factor

IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code

MARPOL - International Convention for the Prevention of Pollution from Ships

ATE - Acute Toxicity Estimate

VOC - (Volatile Organic Compound)

Key literature references and sources for data

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

SAFETY DATA SHEET

2-Ethyl-2-(hydroxymethyl)-1,3-propanediol

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet