

Issue Date 16-Apr-2021

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1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Product Name **2-Ethylhexanol**

Chemical Name 2-Ethylhexan-1-ol CAS No 104-76-7

Other means of identification

Pure substance/mixture Substance

Recommended use of the chemical and restrictions on use

Application Use: in coatings, in functional fluids, in cleaning agents and in oil and gas field drilling.

Uses advised against Not identified.

Details of the supplier of the safety data sheet

Manufacturer Address

Perstorp Oxo AB
SE-444 84 Stenungsund
Sweden
Tel. +46 303 728600
Fax. +46 303 728607
www.perstorp.com

Supplier Address

Perstorp Polyols, Inc.
600 Matzinger Road
Toledo, Ohio 43612
Tel: 419-729-5448/ 800-537-0280
www.perstorp.com

E-mail address productinfo@perstorp.com

Emergency telephone number

Canada (+)1 866 519 4752 (contract no: 334101)

2. HAZARDS IDENTIFICATION

Classification

Acute toxicity - Inhalation (Vapors) - Category 4
Skin corrosion/irritation - Category 2
Serious eye damage/eye irritation - Category 2A
Specific target organ toxicity (single exposure) - Category 3
Flammable liquids - Category 4

Label elements

Symbols/Pictograms



Signal word

Warning

Hazard statements

Harmful if inhaled

Causes serious eye irritation
 Causes skin irritation
 May cause respiratory irritation
 Combustible liquid

Precautionary Statements

Avoid breathing dust/fume/gas/mist/vapors/spray
 Wear protective gloves and eye/face protection
 IF INHALED: Remove person to fresh air and keep comfortable for breathing
 Call a POISON CENTER or doctor if you feel unwell
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 IF ON SKIN: Wash with plenty of water and soap

Contains: 2-Ethylhexan-1-ol

Supplemental information

No information available

Hazards not otherwise classified (HNOC)

Other hazards

May be harmful if swallowed. Harmful to aquatic life. The product is not explosive. However, formation of explosive air/vapour mixtures are possible.

Unknown Acute Toxicity

Not applicable, Substance

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Chemical Name	CAS No	Weight-%
2-Ethylhexan-1-ol	104-76-7	100

4. FIRST AID MEASURES

Description of first aid measures

General advice	Remove any clothing soiled by the product.
Inhalation	Remove to fresh air. If irritation persists get medical advice/attention.
Skin contact	Immediately flush skin with water and rinse skin with soap and water for at least 5-10 minutes. Use lukewarm water if possible. Remove contaminated clothing and shoes. Get medical attention if redness does not disappear.
Eye contact	Immediately flush eyes, also under eyelids, with water for at least 5-10 minutes. Use lukewarm water if possible. Get medical attention.
Ingestion	Do NOT induce vomiting. Call a physician or poison control center immediately.
Self-protection of the first aider	Avoid any direct contact with the product.

Most important symptoms and effects, both acute and delayed

May cause coughing, difficult breathing and nausea. Headache. Dizziness. Gastrointestinal discomfort. Unconsciousness.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Carbon dioxide (CO₂). Water spray (fog). Extinguishing powder. Alcohol resistant foam.

Unsuitable extinguishing media

Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air.

Hazardous combustion products

Carbon monoxide (CO) Carbon dioxide (CO₂)

Protective equipment and precautions for firefighters

Wear self-contained breathing apparatus and protective suit. Use personal protective equipment as required.

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Prevent fire extinguishing water from contaminating surface water or the ground water system. Stay upwind.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions

Keep people away from and upwind of spill/leak. Avoid breathing vapors or mists. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation, especially in confined areas. Remove all sources of ignition.

Environmental precautions

Do not allow into any sewer, on the ground or into any body of water. See Section 12 for additional ecological information. Local authorities should be advised if significant spillages cannot be contained.

Methods and material for containment and cleaning up

Methods for containment

bunding, covering of drains

Small spill

Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal

Large spill

Pump up the product into a spare container suitably labelled.

Methods for cleaning up

Clean contaminated surface thoroughly. After cleaning, flush away traces with water.

Reference to other sections

See section 8 for more information. See section 13 for more information.

7. HANDLING AND STORAGE

Precautions for safe handling

If possible, use only in closed system. Avoid breathing vapors or mists. Avoid contact with skin, eyes or clothing. Use personal protection recommended in Section 8. Ensure good ventilation at the work station. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity).

Conditions for safe storage, including any incompatibilities

Keep tightly closed in a dry and cool place

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Users are advised to consider national Occupational Exposure Limits or other equivalent values. (if existing).

Appropriate engineering controls

Emergency shower and eye wash facilities must exist in the work place. Ensure adequate ventilation, especially in confined areas

Individual protection measures, such as personal protective equipment

Eye/face protection

Tight sealing safety goggles

Hand Protection

Wear protective gloves. Ensure that the breakthrough time of the glove material is not

exceeded. Refer to glove supplier for information on breakthrough time for specific gloves.

Duration of contact	material	Glove thickness	Break through time	Remarks
Suitable materials also with prolonged, direct contact (corresponding > 480 minutes of permeation time):	Nitrile rubber, NBR	>=0.55 mm		
Suitable materials also with prolonged, direct contact (corresponding > 480 minutes of permeation time):	Polyvinyl chloride (PVC)	>=0.8 mm		

Skin and body protection

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection

Suitable respiratory protection for lower concentrations or short-term exposure:
Gas filter for gases/vapours of organic compounds (boiling point >65°C e.g. organic vapor/gas cartridge)
Suitable respiratory protection for higher concentrations or long-term exposure:
Self-contained breathing apparatus.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance

Physical state

liquid

Color

colorless

Odor

unpleasant

Odor threshold

0.08 ppm

Property

Value

Remarks • Method

pH

No information available

Melting point / freezing point

< -20 °C / -4 °F

Boiling point / boiling range

186 °C / 367 °F

Flash point

75 °C / 167 °F

Evaporation rate

No information available

Flammability (solid, gas)

No information available

Explosive limits

Upper explosive limits

12.7 %

No information available

Lower explosive limits

1.1 %

No information available

Vapor pressure

0.03 kPa

@ 25 °C Calculation method

Vapor density

No information available

Relative density

No information available

Water solubility

0.9 g/L

@ 20 °C OECD Test No. 105: Water Solubility

Solubility(ies)

No information available

Partition coefficient

2.9

log POW (@25°C) OECD Test No. 117: Partition Coefficient (n-octanol/water), HPLC Method

Autoignition temperature

260 °C / 500 °F

ASTM E 659-78

Decomposition temperature

No information available

Kinematic viscosity

No information available

Dynamic viscosity

9.7 mPa s

ISO 3219

Explosive properties

Not explosive. May form explosive mixtures with air

Oxidizing properties

Not oxidizing.

Density

0.832 g/cm³

@20°C, ISO 2811-2

Bulk density

No information available

Other Information

No information available

10. STABILITY AND REACTIVITY

Reactivity

The substance is an alcohol. Alcohols exhibit both weak acid and weak base behavior. They may initiate the polymerization of isocyanates and epoxides.

Chemical stability

Stable under normal conditions.

Possibility of Hazardous Reactions

Reacts with: Oxidizing substances, Acids.

Conditions to avoid

No information available.

Incompatible materials

No information available.

Hazardous decomposition products

Thermal decomposition can lead to release of irritating and toxic gases and vapors: Carbon monoxide (CO), Carbon dioxide (CO₂).

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Dermal. Inhalation.

Symptoms related to the physical, chemical and toxicological characteristics**Most important symptoms and effects, both acute and delayed**

May cause coughing, difficult breathing and nausea. Headache. Dizziness. Gastrointestinal discomfort. Unconsciousness.

Numerical measures of toxicity

Unknown Acute Toxicity Not applicable, Substance

Acute toxicity

Harmful if inhaled. May be harmful if swallowed.

2-Ethylhexan-1-ol (104-76-7)				
Method	Species	Exposure route	Effective dose	Remarks
OECD Test No. 401: Acute Oral Toxicity	Rat	Oral	2047	mg/kg LD50 (lethal dose)
OECD Test No. 402: Acute Dermal Toxicity	Rat	Dermal	>3000	mg/kg LD0
OECD Test No. 403: Acute Inhalation Toxicity	Rat	Inhalation	>0.89	mg/l LC50

Skin corrosion/irritation

Irritating to skin.

2-Ethylhexan-1-ol (104-76-7)			
Method	Species	Exposure route	Results:
OECD Test No. 404: Acute Dermal Irritation/Corrosion	rabbit	Dermal	Irritating to skin

Serious eye damage/eye irritation

Causes serious eye irritation.

2-Ethylhexan-1-ol (104-76-7)			
Method	Species	Exposure route	Results:
OECD Test No. 405: Acute Eye Irritation/Corrosion	rabbit	Eye	Irritating to eyes (GHS cat. 2A)

Respiratory or skin sensitization

No sensitising effects known.

2-Ethylhexan-1-ol (104-76-7)			
Method	Species	Exposure route	Results:
	human data		No sensitising effects known.

Germ cell mutagenicity

The product is not considered to be mutagenic.

2-Ethylhexan-1-ol (104-76-7)		
Method	Species	Results:
OECD Test No. 471: Bacterial Reverse Mutation Test OECD 472	in vitro	Negative
OECD Test No. 473: In vitro Mammalian Chromosome Aberration Test	in vitro	Negative
OECD Test No. 476: In vitro Mammalian Cell Gene Mutation Test	in vitro	Negative

Carcinogenicity

Not suspected as a human carcinogen.

2-Ethylhexan-1-ol (104-76-7)				
Method	Species	Exposure route	Effective dose	Remarks
OECD Test No. 451: Carcinogenicity Studies	Mouse	Oral	750	mg/kg bw/day NOAEL No carcinogenic effects have been observed.
OECD Test No. 451: Carcinogenicity Studies	Rat	Oral	500	mg/kg bw/day NOAEL No carcinogenic effects have been observed.

Reproductive toxicity

Is not considered hazardous to the reproduction.

2-Ethylhexan-1-ol (104-76-7)				
Method	Species	Exposure route	Effective dose	Remarks
OECD Test No. 414: Prenatal Development Toxicity Study	Mouse	Oral	191	mg/kg bw/day NOAEL Developmental Toxicity
OECD Test No. 414: Prenatal Development Toxicity Study	Rat	Dermal	2520	mg/kg NOAEL Developmental Toxicity
OECD Test No. 414: Prenatal Development Toxicity Study	Rat	Inhalation	850	mg/m ³ NOAEC
OECD Test No. 416: Two-Generation Reproduction Toxicity	Rat	Oral	10000	ppm NOAEL P-gen. read-across from supporting substance (structural analogue)
OECD Test No. 416: Two-Generation Reproduction Toxicity	Rat	Oral	3000	ppm NOAEL F1/F2-gen. read-across from supporting substance (structural analogue)

STOT - single exposure

Irritating to respiratory system

2-Ethylhexan-1-ol (104-76-7)				
Method	Species	Exposure route	Effective dose	Remarks
	human data			Irritating to respiratory system

STOT - repeated exposure

2-Ethylhexan-1-ol (104-76-7)				
Method	Species	Exposure route	Effective dose	Remarks
OECD Test No. 408: Repeated Dose 90-Day Oral Toxicity Study in Rodents	Rat	Oral	250	mg/kg bw/day NOAEL
OECD Test No. 408: Repeated Dose 90-Day Oral	Mouse	Oral	250	mg/kg bw/day NOAEL

Toxicity Study in Rodents				
OECD Test No. 413: Subchronic Inhalation Toxicity: 90-day Study	Rat	Inhalation	638.4	mg/m ³ NOAEC

Aspiration hazard

No information available.

12. ECOLOGICAL INFORMATION**Toxicity**

Harmful to aquatic life.

2-Ethylhexan-1-ol (104-76-7)					
Method	Species	Exposure route	Effective dose	Exposure time	Remarks
Regulation (EC) No. 440/2008, Annex, C.1	Leuciscus idus	Freshwater	17.1	96h	mg/l LC50 (lethal concentration)
Regulation (EC) No. 440/2008, Annex, C.2	Daphnia pulex	Freshwater	39	48h	mg/l EC50 (effective concentration)
Regulation (EC) No. 440/2008, Annex, C.3	Scenedesmus subspicatus	Freshwater	11.5	72h	mg/l EC50 (effective concentration)
ETAD Fermentation Tube Method	Bacteria toxicity		>300	24h	mg/l NOEC
OECD Test No. 203: Fish, Acute Toxicity Test	Pimephales promelas	Freshwater	28.2	96h	mg/l LC50 (lethal concentration)

Persistence and degradability

Readily biodegradable.

2-Ethylhexan-1-ol (104-76-7)			
Method	Value	Exposure time	Results:
OECD Test No. 301C: Ready Biodegradability: Modified MITI Test (I) (TG 301 C)	79-99.9%	14d	Readily biodegradable

Bioaccumulative potential

Not potentially bioaccumulable.

Chemical Name	Partition coefficient	Bioconcentration factor (BCF)
2-Ethylhexan-1-ol	2.9	38

Mobility in soil

The substance is not expected to adsorb to a high degree to suspended solids and sediment based upon the log Pow.

Other adverse effects

No information available.

13. DISPOSAL CONSIDERATIONS**Disposal methods**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging

Thoroughly emptied and clean packaging may be recycled. Contaminated packaging materials must be disposed of in the same manner as the product.

14. TRANSPORT INFORMATION

TDG Road transport	Not regulated
RID Rail transport	Not regulated
IMDG Sea transport	Not regulated
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Y, P, 2, 2G
IATA Air transport	Not regulated

15. REGULATORY INFORMATION

International Regulations

Not applicable.

National regulations

Canada

Comply with the legislation concerning equipment and protective systems intended for use in potentially explosive atmospheres.

WHMIS Hazard Class

B3 - Combustible liquid, D2B - Toxic materials

16. OTHER INFORMATION

Key or legend to abbreviations and acronyms used in the safety data sheet

Issue Date 16-Apr-2021
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Revision Note The SDS has been reviewed but no relevant changes found.

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