1. 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

USA

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

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

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
2-Ethylhexanol

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

<table>
<thead>
<tr>
<th>Substance</th>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2-Ethylhexan-1-ol</td>
<td>104-76-7</td>
<td>100</td>
</tr>
</tbody>
</table>

### 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**

**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. Vapors 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
Exposure Guidelines
This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

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. 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.

<table>
<thead>
<tr>
<th>Duration of contact</th>
<th>Material</th>
<th>Glove thickness</th>
<th>Break through time</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suitable materials also with prolonged, direct contact (corresponding &gt; 480 minutes of permeation time):</td>
<td>Nitrile rubber, NBR</td>
<td>&gt;=0.55 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suitable materials also with prolonged, direct contact (corresponding &gt; 480 minutes of permeation time):</td>
<td>Polyvinyl chloride (PVC)</td>
<td>&gt;=0.8 mm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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.

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Remarks &amp; Method</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical state</td>
<td>liquid</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>colorless</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>unpleasant</td>
<td></td>
</tr>
<tr>
<td>Odor threshold</td>
<td>0.08 ppm</td>
<td></td>
</tr>
<tr>
<td><strong>Property</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melting point / freezing point</td>
<td>&lt; -20 °C / -4 °F</td>
<td>No information available</td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>186 °C / 367 °F</td>
<td>OECD Test No. 103: Boiling Point</td>
</tr>
<tr>
<td>Flash point</td>
<td>75 °C / 167 °F</td>
<td>ASTM D 7094-04 CC (closed cup)</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explosive limits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper explosive limits</td>
<td>12.7 %</td>
<td>No information available</td>
</tr>
<tr>
<td>Lower explosive limits</td>
<td>1.1 %</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>0.03 kPa</td>
<td>@ 25 °C Calculation method</td>
</tr>
<tr>
<td>Vapor density</td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td>Relative density</td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td>Water solubility</td>
<td>0.9 g/L</td>
<td>@ 20 °C OECD Test No. 105: Water Solubility</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>2.9</td>
<td>log POW (25°C) OECD Test No. 117: Partition Coefficient (n-octanol/water), HPLC Method</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>260 °C / 500 °F</td>
<td>ASTM E 659-78</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>9.7 mPa s</td>
<td>ISO 3219</td>
</tr>
<tr>
<td>Explosive properties</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not explosive. May form explosive mixtures with air</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Density</td>
<td>0.832 g/cm³</td>
<td>@20°C, ISO 2811-2</td>
</tr>
<tr>
<td>Bulk density</td>
<td></td>
<td>No information available</td>
</tr>
</tbody>
</table>

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**

**Numerical measures of toxicity**

**Unknown Acute Toxicity**
Not applicable, Substance

**Acute toxicity**
Harmful if inhaled. May be harmful if swallowed.

<table>
<thead>
<tr>
<th>2-Ethylhexan-1-ol (104-76-7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method</td>
</tr>
<tr>
<td>OECD Test No. 401: Acute Oral Toxicity</td>
</tr>
<tr>
<td>OECD Test No. 402: Acute Dermal Toxicity</td>
</tr>
<tr>
<td>OECD Test No. 403: Acute Inhalation Toxicity</td>
</tr>
</tbody>
</table>

**Skin corrosion/irritation**
Irritating to skin.

<table>
<thead>
<tr>
<th>2-Ethylhexan-1-ol (104-76-7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method</td>
</tr>
<tr>
<td>OECD Test No. 404: Acute Dermal Irritation/Corrosion</td>
</tr>
</tbody>
</table>

**Serious eye damage/eye irritation**
Causes serious eye irritation.

<table>
<thead>
<tr>
<th>2-Ethylhexan-1-ol (104-76-7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method</td>
</tr>
<tr>
<td>OECD Test No. 405: Acute Eye Irritation/Corrosion</td>
</tr>
</tbody>
</table>
Respiratory or skin sensitization
No sensitising effects known.

2-Ethylhexan-1-ol (104-76-7)

<table>
<thead>
<tr>
<th>Method</th>
<th>Species</th>
<th>Exposure route</th>
<th>Results:</th>
</tr>
</thead>
<tbody>
<tr>
<td>human data</td>
<td></td>
<td></td>
<td>No sensitising effects known.</td>
</tr>
</tbody>
</table>

Germ cell mutagenicity
The product is not considered to be mutagenic.

2-Ethylhexan-1-ol (104-76-7)

<table>
<thead>
<tr>
<th>Method</th>
<th>Species</th>
<th>Exposure route</th>
<th>Results:</th>
</tr>
</thead>
<tbody>
<tr>
<td>OECD Test No. 471: Bacterial Reverse Mutation Test OECD 472</td>
<td></td>
<td>in vitro</td>
<td>Negative</td>
</tr>
<tr>
<td>OECD Test No. 473: In vitro Mammalian Chromosome Aberration Test</td>
<td></td>
<td>in vitro</td>
<td>Negative</td>
</tr>
<tr>
<td>OECD Test No. 476: In vitro Mammalian Cell Gene Mutation Test</td>
<td></td>
<td>in vitro</td>
<td>Negative</td>
</tr>
</tbody>
</table>

Carcinogenicity
Not suspected as a human carcinogen.

2-Ethylhexan-1-ol (104-76-7)

<table>
<thead>
<tr>
<th>Method</th>
<th>Species</th>
<th>Exposure route</th>
<th>Effective dose</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>OECD Test No. 451: Carcinogenicity Studies</td>
<td>Mouse</td>
<td>Oral</td>
<td>750</td>
<td>mg/kg bw/day NOAEL Developmental Toxicity</td>
</tr>
<tr>
<td>OECD Test No. 451: Carcinogenicity Studies</td>
<td>Rat</td>
<td>Oral</td>
<td>500</td>
<td>mg/kg bw/day NOAEL Developmental Toxicity</td>
</tr>
</tbody>
</table>

Reproductive toxicity
Is not considered hazardous to the reproduction.

2-Ethylhexan-1-ol (104-76-7)

<table>
<thead>
<tr>
<th>Method</th>
<th>Species</th>
<th>Exposure route</th>
<th>Effective dose</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>OECD Test No. 414: Prenatal Development Toxicity Study</td>
<td>Mouse</td>
<td>Oral</td>
<td>191</td>
<td>mg/kg bw/day NOAEL</td>
</tr>
<tr>
<td>OECD Test No. 414: Prenatal Development Toxicity Study</td>
<td>Rat</td>
<td>Dermal</td>
<td>2520</td>
<td>mg/kg NOAEL Developmental Toxicity</td>
</tr>
<tr>
<td>OECD Test No. 414: Prenatal Development Toxicity Study</td>
<td>Rat</td>
<td>Inhalation</td>
<td>850</td>
<td>mg/m³ NOAEC</td>
</tr>
<tr>
<td>OECD Test No. 416: Two-Generation Reproduction Toxicity</td>
<td>Rat</td>
<td>Oral</td>
<td>10000</td>
<td>ppm NOAEL P-gen. read-across from supporting substance (structural analogue)</td>
</tr>
<tr>
<td>OECD Test No. 416: Two-Generation Reproduction Toxicity</td>
<td>Rat</td>
<td>Oral</td>
<td>3000</td>
<td>ppm NOAEL F1/F2-gen. read-across from supporting substance (structural analogue)</td>
</tr>
</tbody>
</table>

STOT - single exposure
Irritating to respiratory system

2-Ethylhexan-1-ol (104-76-7)

<table>
<thead>
<tr>
<th>Method</th>
<th>Species</th>
<th>Exposure route</th>
<th>Effective dose</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>human data</td>
<td></td>
<td></td>
<td></td>
<td>Irritating to respiratory system</td>
</tr>
</tbody>
</table>

STOT - repeated exposure
2-Ethylhexanol

12. ECOLOGICAL INFORMATION

**Toxicity**
Harmful to aquatic life.

<table>
<thead>
<tr>
<th>Method</th>
<th>Species</th>
<th>Exposure route</th>
<th>Effective dose</th>
<th>Exposure time</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulation (EC) No. 440/2008, Annex, C.1</td>
<td>Leuciscus idus</td>
<td>Freshwater</td>
<td>17.1</td>
<td>96h</td>
<td>mg/l LC50 (lethal concentration)</td>
</tr>
<tr>
<td>Regulation (EC) No. 440/2008, Annex, C.2</td>
<td>Daphnia pulex</td>
<td>Freshwater</td>
<td>39</td>
<td>48h</td>
<td>mg/l EC50 (effective concentration)</td>
</tr>
<tr>
<td>Regulation (EC) No. 440/2008, Annex, C.3</td>
<td>Scenedesmus subspicatus</td>
<td>Freshwater</td>
<td>11.5</td>
<td>72h</td>
<td>mg/l EC50 (effective concentration)</td>
</tr>
<tr>
<td>ETAD Fermentation Tube Method</td>
<td>Bacteria toxicity</td>
<td>Freshwater</td>
<td>&gt;300</td>
<td>24h</td>
<td>mg/l NOEC</td>
</tr>
<tr>
<td>OECD Test No. 203: Fish, Acute Toxicity Test</td>
<td>Pimephales promelas</td>
<td>Freshwater</td>
<td>28.2</td>
<td>96h</td>
<td>mg/l LC50 (lethal concentration)</td>
</tr>
</tbody>
</table>

**Persistence and degradability**
Readily biodegradable.

<table>
<thead>
<tr>
<th>Method</th>
<th>Value</th>
<th>Exposure time</th>
<th>Results:</th>
</tr>
</thead>
<tbody>
<tr>
<td>OECD Test No. 301C: Ready Biodegradability: Modified MITI Test (I) (TG 301 C)</td>
<td>79-99.9%</td>
<td>14d</td>
<td>Readily biodegradable</td>
</tr>
</tbody>
</table>

**Bioaccumulative potential**
Not potentially bioaccumulable.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Partition coefficient</th>
<th>Bioconcentration factor (BCF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Ethylhexan-1-ol</td>
<td>2.9</td>
<td>38</td>
</tr>
</tbody>
</table>

**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.
**Disposal methods**

**Waste from residues/unused products**
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

**DOT  Road transport**

<table>
<thead>
<tr>
<th>UN/ID no</th>
<th>NA1993</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>Combustible liquid, n.o.s.</td>
</tr>
<tr>
<td>Proper Shipping Description</td>
<td>NA1993, Combustible liquid, n.o.s. (2-ETHYLHEXAN-1-OL), Combustible liquid, III</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>Combustible liquid</td>
</tr>
<tr>
<td>Packing Group</td>
<td>III</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>IB3, T1, T4, TP1</td>
</tr>
<tr>
<td>Emergency Response Guide Number</td>
<td>128</td>
</tr>
</tbody>
</table>

**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

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

**International Regulations**
Not applicable.

**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

**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)

**CERCLA**
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

**TSCA Inventory**
Listed and active in the TSCA registry.

**US State Regulations**
2-Ethylhexanol

California Proposition 65
This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations
Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health hazards</th>
<th>Flammability</th>
<th>Instability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health hazards</th>
<th>Flammability</th>
<th>Physical hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

Physical and Chemical Properties: Not available

Key or legend to abbreviations and acronyms used in the safety data sheet
Not applicable

Issue Date: 19-Apr-2021
Revision Date: 19-Apr-2021
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