

GPS Safety Summary

This Product Safety Summary is intended to provide a brief overview of the information on the risk assessment results of the chemical product that we manufacture based on the chemical industry's Global Product Strategy (GPS) to the general public as a social responsibility of a company that manufacture chemical substances.

This summary is not intended to provide technical information including effects on human health and the environment and details of risk assessment. In addition, it is not intended to be prepared as a document to replace a Safety Data Sheet (SDS) or a risk assessment report like a Chemical Safety Report under the REACH (Registration, Evaluation, Authorization and Restriction of Chemicals) (REACH CSR). Although the summary is prepared based on the laws, materials, information and data that are available at the present moment, it does not provide any assurances.

SUBSTANCE NAME

2-Ethylhexanol (CAS No. 104-76-7)

GENERAL STATEMENT

2-Ethylhexanol is a colorless flammable liquid with perfume like a rose. It is mainly used as material of vinyl chloride resin plasticizer. The other usage is for coating, adhesive or printing inks. It is also used for flavoring agents for food additives.

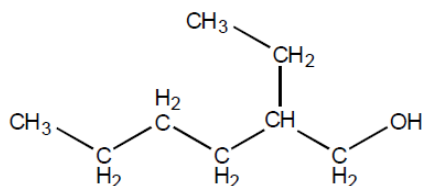
2-Ethylhexanol is a highly flammable liquid, therefore it is important to keep away from heat, sparks, open flames or hot sources. 2-Ethylhexanol causes harmful in contact with skin, causes skin irritation, causes serious eye irritation, may cause respiratory irritation, may cause drowsiness or dizziness and may be harmful if swallowed and enters airways. Though 2-Ethylhexanol is toxic to aquatic life, 2-Ethylhexano is biodegradable and low bioaccumulative.

It is recommended to wear appropriate protective masks, gloves when sampling for manufacturing. To minimize the adverse effects of sulfuric acid on environmental organisms and control its release into the environment, the sewage equipment should be monitored regularly and the sewage treatment facility should be maintained and inspected in the factory.

CHEMICAL IDENTITY

Item	Contents
Generic name	2-Ethylhexanol
Trade name	2-Ethylhexanol
Chemical name	2-Ethylhexan-1-ol
CAS No.	104-76-7
Other numbers	Reference No. listed in the official gazettes (Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc., Industrial Safety and Health Act): (2)-217 EC number: 203-234-3
Molecular formula	C ₈ H ₁₈ O

Structural formula



Other information

None in particular

USES AND APPLICATIONS

Main uses of our product

Raw material for plasticizer or solvent for adhesive

PHYSICAL/CHEMICAL PROPERTIES

Appearance (physical state)	Liquid
Color	Colorless
Odor	Specific odor
Specific gravity (relative density)	0.832g/cm ³
Melting point/boiling point	-70°C/184.6°C
Combustibility/flammability	Flammable liquid
Flash point	73°C (closed cup)
Limit of combustion or explosion	0.9 - 9.7 vol%
Auto ignition temperature	287.8°C
Vapor pressure	48Pa (20°C)
Molecular weight	130.23
Water solubility	0.1 g/100 g (20°C)
Octanol-water partition coefficient	LogKow : 2.28

HEALTH EFFECTS

Effect assessment	Results (GHS ^{*1} hazard classification)
Acute toxicity (oral ingestion)	Not classified ^{*2}
Acute toxicity (inhalation)	Not applicable ^{*3} (gas) Classification not possible ^{*4} (no toxicity report) Not classified (dust/mist)
Acute toxicity (dermal)	Harmful in contact with skin (Category 4)
Skin corrosion/irritation	Causes skin irritation (Category 2)
Serious eye damage/eye irritation	Causes serious eye irritation (Category 2)
Respiratory sensitization	Classification not possible (no toxicity report)
Skin sensitization	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	Classification not possible (no toxicity report)
Reproductive toxicity	Classification not possible (no toxicity report)
Specific target organ toxicity (Single exposure)	May cause respiratory irritation, drowsiness or dizziness (Category 3)
Specific target organ toxicity (Repeated exposure)	Classification not possible ^{*4}
Aspiration hazard	May be harmful if swallowed and enters airways (Category 2)

Source/remarks

- *¹ GHS: Globally Harmonized System of Classification and Labelling of Chemicals. This system enables us to classify chemicals by hazard type and degree according to globally harmonized rules.
- *² Not classified: Hazardousness much lower than the lowest hazard class specified by GHS
- *³ Not applicable: Because the physical properties defined by GHS are not met, the chemical is not included in the target chemicals of the classification.
- *⁴ Classification not possible: The data needed for judging classification are not available at all or sufficient data are not collected for classification.

ENVIRONMENTAL EFFECTS

Effect assessment	Results (GHS hazard classification)
Hazardous to the aquatic environment (acute)	Toxic to aquatic life (Category 2)
Hazardous to the aquatic environment (chronic)	Not classified
Environmental fate/dynamics	Results
Transfer in the environment	Easily transfer to the atmosphere or water.
Biodegradability	Biodegradability is reported to be readily biodegradable.
Bioaccumulation	Bioaccumulation is reported to be low.
Conclusion of PBT/vPvB	Not judged to be PBT* and vPvB**.
	*PBT: Persistent, bioaccumulative and toxic (Remaining in the environment and having high bioaccumulative and strong toxic properties)
	**vPvB: very Persistent and very Bioaccumulative (Readily remaining in the environment and having very high bioaccumulative property)

EXPOSURE

Details	No.	Potential exposure in the process of use of our products (exposure route)
Occupational exposure	1-1	Manufacture/purification, transfer
Consumer exposure	2-1	This material is not used by consumers and therefore the potential for consumer exposure is low.
Environmental exposure	3-1	Manufacture, purification, transfer (atmospheric environment and water bodies)
Note		If there is the potential for exposure in the other uses, take appropriate measures in reference to the risk management recommends.

RISK MANAGEMENT RECOMMENDATIONS

Details	No.	Management recommendations based on our risk assessment results
Occupational exposure	1-1	<p>Wear appropriate protectors that prevent dermal absorption, skin or eye contact and inhalation of vapor while handling the products containing 2-Ethylhexanol.</p> <p>Use local ventilating apparatus to assure sufficient ventilation while handling in a room. Instruct workers on how to select and use the appropriate protective equipment properly and how to manage the workplace with ventilators.</p>

Consumer exposure	2-1	None
Environmental exposure	3-1	Regularly check environment for discharge of 2-Ethylhexanol. Appropriate wastewater treatment, regular maintenance and inspection of the drainage should be taken in to practice. If 2-Ethylhexanol leaks into environment, quickly take measurement to prevent spread of contamination and collect leakage. Disposal should be in accordance with local regulation
Other warnings		Because 2-Ethylhexanol is highly flammable, keep away from ignition source such as heat/sparks/open flames/hot surfaces. Wear anti-static conductive shoes while handling this material.
Note		For the measures and actions to be taken for regular handling, emergency situations, disposal and transportation, see Section 4, 5, 6, 7, 8, 13 and 14, SDS issued by Mitsubishi Chemical Corporation.

STATE AGENCY REVIEW

Assessment document	Review condition
OECD HPV	http://www.chem.echemportal.org/echemportal/index?pageID=0&request_locale=en
US HPV	http://www.epa.gov/hpvis/
REACH	http://apps.echa.europa.eu/registered/registered-sub.aspx

REGULATORY INFORMATION / LABELLING INFORMATION

Main regulatory information

Law	Regulatory condition
Fire Service Act	Hazardous Materials Class 4, Class 3 Petroleum, Non-aqueous, Hazard Class III
Act for the Prevention of Marine Pollution and Maritime Disasters	Marine Pollutants in the Case of Bulk Transportation (Class Y)

Labelling information

Pictograms or symbols



Signal Word

Hazard statement

Warning

- Combustible liquid
- Harmful in contact with skin
- Causes skin irritation
- Causes serious eye irritation
- May cause respiratory irritation
- May cause drowsiness or dizziness
- May be harmful if swallowed and enters airways
- Toxic to aquatic life

CONTACT INFORMATION WITHIN COMPANY

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