

2-Ethylhexanol

Version number: GHS 1.0

Date of compilation: 2020-06-01

SECTION 1: Identification

1.1 Product identifier

Identification of the substance 2-Ethyl-1-hexanol

CAS number 104-76-7

Synonyms:

2-Ethylhexanol

2-Ethylhexyl alcohol

Ethylhexanol (non-specific name)

2-Ethylhexan-1-ol

2-Éthylhexane-1-ol

2-Etilhexan-1-ol

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses Industrial use

1.3 Details of the supplier of the safety data sheet

Síntesis Orgánicas S.A. de C.V.
Km. 154 Carr. México - Veracruz
90640 San Cosme Xaloztoc, Tlaxcala
Mexico

Telephone: +52 241 413 0000

Website: www.grupoidesa.com

e-mail (competent person)

jalvarez@idesa.com.mx (Juan Carlos Alvarez)

1.4 Emergency telephone number

Emergency information service

01-800-00-214-00

Tel. (55) 5559 1588 Cd. de México.

SETIQ.

SECTION 2: Hazard(s) identification

2.1 Classification of the substance or mixture

Classification acc. to GHS

Section	Hazard class	Category	Hazard class and category	Hazard statement
2.6	flammable liquid	4	Flam. Liq. 4	H227
3.1O	acute toxicity (oral)	5	Acute Tox. 5	H303
3.1I	acute toxicity (inhal.)	3	Acute Tox. 3	H331
3.2	skin corrosion/irritation	2	Skin Irrit. 2	H315
3.3	serious eye damage/eye irritation	2	Eye Irrit. 2	H319
3.8R	specific target organ toxicity - single exposure (respiratory tract irritation)	3	STOT SE 3	H335
4.1A	hazardous to the aquatic environment - acute hazard	3	Aquatic Acute 3	H402

2-Ethylhexanol

Version number: GHS 1.0

Date of compilation: 2020-06-01

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects

The product is combustible and can be ignited by potential ignition sources. Spillage and fire water can cause pollution of water-courses.

2.2 Label elements

Labeling

- Signal word danger

- Pictograms

GHS06



- Hazard statements

H227	Combustible liquid.
H303	May be harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H402	Harmful to aquatic life.

- Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P280	Wear protective gloves/eye protection/face protection.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P311	Call a POISON CENTER/doctor.
P370+P378	In case of fire: Use sand, carbon dioxide or powder extinguisher to extinguish.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents/container to industrial combustion plant.

2.3 Other hazards

This material is combustible, but will not ignite readily.

Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

2-Ethylhexanol

Version number: GHS 1.0

Date of compilation: 2020-06-01

SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substance	2-Ethylhexanol
Identifiers	
CAS No	104-76-7
Molecular formula	C ₈ H ₁₈ O
Molar mass	130.2 g/mol

SECTION 4: First-aid measures

4.1 Description of first- aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician. Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

4.3 Indication of any immediate medical attention and special treatment needed

None

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray, BC-powder, Carbon dioxide (CO₂), Alcohol resistant foam.

Unsuitable extinguishing media

Water jet

5.2 Special hazards arising from the substance or mixture

In case of insufficient ventilation and/or in use, may form flammable/explosive vapor-air mixture. Solvent vapors are heavier than air and may spread along floors. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures.

2-Ethylhexanol

Version number: GHS 1.0

Date of compilation: 2020-06-01

Hazardous combustion products

Nitrogen oxides (NO_x), Carbon monoxide (CO), Carbon dioxide (CO₂)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advices on how to contain a spill

Covering of drains

Advices on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: Sawdust, Kieselgur (diatomite), Sand, Universal binder

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 9. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Avoidance of ignition sources. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge. Use only in well-ventilated areas. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools.

- Specific notes/details

Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapors are heavier than air, spread along floors and form explosive mixtures with air. Vapors may form explosive mixtures with air.

2-Ethylhexanol

Version number: GHS 1.0

Date of compilation: 2020-06-01

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

- Explosive atmospheres

Keep container tightly closed and in a well-ventilated place. Use local and general ventilation. Keep cool. Protect from sunlight.

- Flammability hazards

Keep away from sources of ignition - No smoking. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Protect from sunlight.

- Ventilation requirements

Keep any substance that emits harmful vapors or gases in a place that allows these to be permanently extracted. Use local and general ventilation. Ground/bond container and receiving equipment.

7.3 Specific end use(s)

See section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

These information are not available.

Human health values

Relevant DNELs and other threshold levels				
Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
DNEL	12.8 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
DNEL	53.2 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
DNEL	53.2 mg/m ³	human, inhalatory	worker (industry)	acute - local effects
DNEL	23 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

Environment values

Relevant PNECs and other threshold levels				
Endpoint	Threshold level	Organism	Environmental compartment	Exposure time
PNEC	55 mg/kg	aquatic organisms	water	short-term (single instance)
PNEC	0.17 mg/l	aquatic organisms	water	intermittent release
PNEC	0.017 mg/l	aquatic organisms	freshwater	short-term (single instance)
PNEC	0.002 mg/l	aquatic organisms	marine water	short-term (single instance)
PNEC	10 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
PNEC	0.284 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
PNEC	0.028 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
PNEC	0.047 mg/kg	terrestrial organisms	soil	short-term (single instance)

2-Ethylhexanol

Version number: GHS 1.0

Date of compilation: 2020-06-01

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

- Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	liquid
Color	colorless
Odor	Similar to alcohol

Other safety parameters

pH (value)	not determined
Melting point/freezing point	-76 °C
Initial boiling point and boiling range	186 °C at 101.3 kPa
Flash point	75 °C at 101.3 kPa
Evaporation rate	not determined
Flammability (solid, gas)	not relevant (fluid)

2-Ethylhexanol

Version number: GHS 1.0

Date of compilation: 2020-06-01

Explosive limits

- Lower explosion limit (LEL)	0.79 vol%
- Upper explosion limit (UEL)	9,7 vol%

Vapor pressure	380 Pa at 50 °C
Density	0.833 g/cm ³ at 20 °C
Vapor density	this information is not available

Solubility(ies)

- Water solubility	0.9 g/l at 20 °C
--------------------	------------------

Partition coefficient

- n-octanol/water (log KOW)	2.9 (pH value: 7, 25 °C) (ECHA)
-----------------------------	---------------------------------

Auto-ignition temperature	270 °C
---------------------------	--------

Viscosity

- Dynamic viscosity	10 mPa s at 20 °C
---------------------	-------------------

Explosive properties	none
----------------------	------

Oxidizing properties	none
----------------------	------

9.2 Other information

Surface tension	47 mN/m (20 °C) (ECHA)
Temperature class (USA, acc. to NEC 500)	T2B (maximum permissible surface temperature on the equipment: 260°C)

SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials". It's a reactive substance. The mixture contains reactive substance(s). Risk of ignition.

If heated:

Risk of ignition

2-Ethylhexanol

Version number: GHS 1.0

Date of compilation: 2020-06-01

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hints to prevent fire or explosion

Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

10.5 Incompatible materials

Oxidizers

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Classification acc. to GHS

Acute toxicity

May be harmful if swallowed. Toxic if inhaled.

May be harmful if swallowed.

- Acute toxicity estimate (ATE)

Oral 2,047 mg/kg

Inhalation: vapor 5.3 mg/4h

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitization

Shall not be classified as a respiratory or skin sensitizer.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

May cause respiratory irritation.

2-Ethylhexanol

Version number: GHS 1.0

Date of compilation: 2020-06-01

Specific target organ toxicity - repeated exposure

The classification criteria for this hazard class are not met. Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Harmful to aquatic life.

Aquatic toxicity (acute)			
Endpoint	Value	Species	Exposure time
LC50	17.1 mg/l	fish	96 h
EC50	39 mg/l	aquatic invertebrates	48 h
ErC50	16.6 mg/l	algae	72 h

Biodegradation

The substance is readily biodegradable. The relevant substances of the mixture are readily biodegradable.

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

n-octanol/water (log KOW)	2.9 (pH value: 7, 25 °C) (ECHA)
---------------------------	---------------------------------

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste treatment-relevant information

Solvent reclamation/regeneration.

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

2-Ethylhexanol

Version number: GHS 1.0

Date of compilation: 2020-06-01

Waste treatment of containers/packages

Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1 UN number

14.2 UN proper shipping name

Not relevant

14.3 Transport hazard class(es)

Class

-

14.4 Packing group

not relevant

14.5 Environmental hazards

non-environmentally hazardous acc. to the dangerous goods regulations

14.6 Special precautions for user

There is no additional information.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

The cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations

International Maritime Dangerous Goods Code (IMDG)

Not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR)

UN number

3334

Proper shipping name

Aviation regulated liquid, n.o.s.

Class

9

Packing group

III

Danger label(s)

9



Special provisions (SP)

A27, 274

Excepted quantities (EQ)

E1

Limited quantities (LQ)

30 kg

2-Ethylhexanol

Version number: GHS 1.0

Date of compilation: 2020-06-01

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

There is no additional information.

National regulations (United States)

Toxic Substance Control Act (TSCA) substance is listed

SARA TITLE III (Superfund Amendment and Reauthorization Act)

- List of Extremely Hazardous Substances (40 CFR 355) (EPCRA Section 302 and 304)
not listed

- Specific Toxic Chemical Listings (40 CFR 372) (EPCRA Section 313)
not listed

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act)

- Section 102(A) Hazardous Substances (40 CFR 302.4)
not listed

Clean Air Act
not listed

New Jersey Worker and Community Right to Know Act N.J.S.A. 34:5A-1 et. seq.
not listed

California Environmental Protection Agency (Cal/EPA): Proposition 65 Chemicals known to the State to cause cancer or reproductive toxicity

not listed

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information, including date of preparation or last revision

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
vPvB	Very Persistent and very Bioaccumulative

2-Ethylhexanol

Version number: GHS 1.0

Date of compilation: 2020-06-01

Key literature references and sources for data

Norma Oficial Mexicana NOM-018-STPS-2015, Sistema armonizado para la identificación y comunicación de peligros y riesgos por sustancias químicas peligrosas en los centros de trabajo y NMX-R-019-SCFI-2011 Sistema Armonizado de Clasificación y Comunicación de Peligros de los Productos Químicos.

UN Recommendations on the Transport of Dangerous Good. International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

List of relevant phrases (code and full text as stated in chapter 2 and 3)

Code	Text
H227	Combustible liquid.
H303	May be harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H402	Harmful to aquatic life.

Disclaimer

THIS INFORMATION IS BASED UPON CALCULATED DATA. THE COMPANY HAS NO LIABILITY FOR DAMAGES SUFFERED BY THE PURCHASER OR OTHER PERSONS IN HANDLING OF THESE MATERIALS IF SAFETY INSTRUCTIONS WERE NOT FOLLOWED. THE COMPANY HAS NO LIABILITY FOR MISUSE OF THIS MATERIAL, EVEN IF THE SAFETY INSTRUCTIONS WERE FOLLOWED. PURCHASER IS RESPONSIBLE FOR THE USE OF THIS MATERIAL. THIS SAFETY DATA SHEET IS PREPARED IN ACCORDANCE WITH THE GUIDELINES OF THE CURRENT MEXICAN OFFICIAL STANDARD. CONFIDENTIAL INFORMATION ABOUT THE COMPOSITION WAS OMITTED. THE INFORMATION IS CONSIDERED CORRECT, BUT IS NOT EXHAUSTIVE AND WILL BE USED ONLY AS A GUIDANCE, WHICH IS BASED ON THE CURRENT KNOWLEDGE OF THE CHEMICAL SUBSTANCE OR MIXTURE AND IS APPLICABLE TO THE APPROPRIATE SAFETY PRECAUTIONS FOR THE PRODUCT.