

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date: 26.02.2019

Version number: 5

Revision: 25.02.2019

**SECTION 1: Identification of the substance/mixture and of the company/
undertaking**

1.1 Trade name: ethylene glycol**Chemical Identification** ethane-1,2-diol**CAS Number:**

107-21-1

EC number:

203-473-3

Index number:

603-027-00-1

Registration number 01-2119456816-28-xxxx**Life cycle stages**

C Consumer use

PW Widespread use by professional workers

IS Use at industrial Sites

Sector of Use

SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites

SU21 Consumer uses: Private households / general public / consumers

SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Product category

PC1 Adhesives, sealants

PC4 Anti-Freeze and de-icing products

PC8 Biocidal products

PC9a Coatings and paints, thinners, paint removers

PC15 Non-metal-surface treatment products

PC16 Heat transfer fluids

PC17 Hydraulic fluids

PC18 Ink and toners

PC23 Leather treatment products

PC31 Polishes and wax blends

PC32 Polymer preparations and compounds

PC34 Textile dyes, and impregnating products

PC35 Washing and cleaning products (including solvent based products)

Process category

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition

PROC4 Chemical production where opportunity for exposure arises

PROC5 Mixing or blending in batch processes

PROC6 Calendering operations

PROC7 Industrial spraying

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities

PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

PROC10 Roller application or brushing

PROC11 Non industrial spraying

PROC13 Treatment of articles by dipping and pouring

PROC14 Tableting, compression, extrusion, pelletisation, granulation

PROC15 Use as laboratory reagent

PROC17 Lubrication at high energy conditions in metal working operations

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*PROC18 General greasing /lubrication at high kinetic energy conditions**PROC19 Manual activities involving hand contact**PROC20 Use of functional fluids in small devices***1.30 Environmental release category***ERC1 Manufacture of the substance**ERC2 Formulation into mixture**ERC3 Formulation into solid matrix**ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)**ERC5 Use at industrial site leading to inclusion into/onto article**ERC6a Use of intermediate**ERC6b Use of reactive processing aid at industrial site (no inclusion into or onto article)**ERC6c Use of monomer in polymerisation processes at industrial site (inclusion or not into/onto article)**ERC6d Use of reactive process regulators in polymerisation processes at industrial site (inclusion or not into/onto article)**ERC7 Use of functional fluid at industrial site**ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)**ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)**ERC8d - Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)**ERC8f Widespread use leading to inclusion into/onto article (outdoor)**ERC9a Widespread use of functional fluid (indoor)**ERC9b Widespread use of functional fluid (outdoor)***1.2 Application of the substance / the mixture***Polyester resin**Heat transfer fluid***1.3 Manufacturer/Supplier:***Solchem d.o.o.**Tovarniška ulica 48**1000 Ljubljana**Slovenia**Tel: (01) 6200-600**Fax: (01) 6200-629**e-mail: info@solchem.si***1.4 Emergency telephone number:***Instruction in case of health threat:**You should immediately consult with personal or duty doctor, and only in case of health threat call emergency telephone 112.***SECTION 2: Hazards identification****2.1 Classification according to Regulation (EC) No 1272/2008***Acute Tox. 4 H302 Harmful if swallowed.***2.2 Label elements****Hazard pictograms**

GHS07

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Signal word Warning**Hazard statements**

H302 Harmful if swallowed.

Precautionary statements

P260 Do not breathe mist/vapours/spray.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P330 Rinse mouth.

P501 Dispose of contents/container to local regulations.

2.3 Other hazards**Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**SECTION 3: Composition/information on ingredients****3.1 Substances****CAS No. Description**

107-21-1 ethane-1,2-diol

Identification number(s)**EC number:** 203-473-3**Index number:** 603-027-00-1**SECTION 4: First aid measures****4.1 Description of first aid measures****General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

After inhalation: Supply fresh air; consult doctor in case of complaints.**After skin contact:** Immediately rinse with water.**After eye contact:** Rinse opened eye for several minutes under running water.**After swallowing:**

Rinse out mouth and then drink plenty of water.

Call for a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing agents:**CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Use fire extinguishing methods suitable to surrounding conditions.

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5.2 Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in case of fire.

5.3 Advice for firefighters

Protective equipment:

Wear self-contained respiratory protective device.

Wear fully protective suit.

Additional information

Collect contaminated fire fighting water separately. It must not enter the sewage system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures Wear protective clothing.

6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Keep away from heat and direct sunlight.

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Information about fire - and explosion protection: Keep respiratory protective device available.

7.2 Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles: Store in a cool location.

Information about storage in one common storage facility:

Store away from oxidising agents.

See section 10.

Further information about storage conditions:

Max. storage temperature: 60 °C.

Protect from heat and direct sunlight.

Storage class: 10

7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical facilities: No further data; see item 7.

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

107-21-1 ethanediol

WEL	Short-term value: 104** mg/m ³ , 40** ppm
	Long-term value: 10* 52** mg/m ³ , 20** ppm
	Sk *particulate **vapour

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DNELs		
Dermal	DNEL	106 mg/kg (workers-long term-systemic effects) 53 mg/kg (consumer-long term-systemic effects)
Inhalative	DNEL	35 mg/kg (long-term local effects) 7 mg/kg (consumer-long term-local effects)
PNECs		
PNEC		1 mg/l (marine water) 199.5 mg/l (STP) 10 mg/l (fresh water)
PNEC		37 mg/kg (fresh water sediment) 3.7 mg/kg (marine water sediment) 1.53 mg/kg (soil)

Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls

General protective and hygienic measures: Wash hands before breaks and at the end of work.

Respiratory protection:

Protective mask EN 140:1998 / AC:1999, with a filter for organic vapors [boiling point > 65 °C (149 °F)], according to EN 14387:2004 + A1:2008.

Type:A.

Protection of hands:



Protective gloves

EN ISO 374-1:2016

Material of gloves

Fluorocarbon rubber (Viton)

Nitrile rubber, NBR

Natural rubber, NR

Neoprene gloves

PVC gloves

Recommended thickness of the material: $\geq >0.55$ mm

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

For the mixture of chemicals mentioned below the penetration time has to be at least 480 minutes (Permeation according to EN 374 Part 3: Level 3).

Eye protection:

Safety glasses

EN 166:2001

Boots Safety shoes EN ISO 20345:2011

Protective suit Chemical resistant suit, EN 13034:2005+A1:2009

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SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties****General Information****Appearance:**

Form:	Fluid
Colour:	Colourless
Odour:	Sweetish
Odour threshold:	Not determined.
pH-value (100 g/l) at 20 °C:	6–7.5

Change in condition

Melting point/freezing point:	-13 °C
Initial boiling point and boiling range:	197 °C

Flash point:	111 °C
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Flammability (solid, gas):	Not applicable.
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Ignition temperature:	398 °C
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Auto-ignition temperature:	Not determined.
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Explosive properties:	Product does not present an explosion hazard.
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Explosion limits:

Lower:	3 Vol %
Upper:	28 Vol %

Vapour pressure at 25 °C:	0.123 hPa
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Density at 20 °C:	1.11 g/cm ³
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Relative density	Not determined.
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Vapour density	Not determined.
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Evaporation rate	Not determined.
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**Solubility in / Miscibility with
water at 20 °C:**

1.000 g/l

Partition coefficient: n-octanol/water:	Not determined.
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Viscosity:

Dynamic at 25 °C:	16.1 mPas
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Kinematic:	Not determined.
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9.2 Other information	No further relevant information available.
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SECTION 10: Stability and reactivity

10.1 Reactivity	No further relevant information available.
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10.2 Chemical stability**Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions

Reacts with strong acids.

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Reacts with strong oxidising agents.

10.4 Conditions to avoid

Avoid heat, sparks, open flames and other ignition sources.
Water

10.5 Incompatible materials:

Acids
Bases
Oxidants

10.6 Hazardous decomposition products: Carbon monoxide and carbon dioxide

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Harmful if swallowed.

LD/LC50 values relevant for classification:

Oral	LD50	7712 mg/kg (rat)
Dermal	LD50	>3500 mg/kg (rabbit)

Primary irritant effect:

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Serious eye damage/irritation Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Based on available data, the classification criteria are not met.

Reproductive toxicity Based on available data, the classification criteria are not met.

STOT-single exposure Based on available data, the classification criteria are not met.

STOT-repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:

LC50/96 h	72860 mg/l (fish)
EC50	6500–13000 mg/l (algae)
EC50/ 48 h	>100 mg/l (daphnia)

12.2 Persistence and degradability The solvent is biodegradable.

12.3 Bioaccumulative potential Bioaccumulation is unlikely.

12.4 Mobility in soil No further relevant information available.

Additional ecological information:

General notes:

Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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12.5 Results of PBT and vPvB assessment**PBT:** Not applicable.**vPvB:** Not applicable.**12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods**Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

European waste catalogue

HP 6	Acute Toxicity
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Uncleaned packaging:**Recommendation:** Disposal must be made according to official regulations.**Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

14.1 UN-Number**ADR, ADN, IMDG, IATA** not regulated**14.2 UN proper shipping name****ADR, ADN, IMDG, IATA** not regulated**14.3 Transport hazard class(es)****ADR, ADN, IMDG, IATA****Class** not regulated**14.4 Packing group****ADR, IMDG, IATA** not regulated**14.5 Environmental hazards:**

Not applicable.

14.6 Special precautions for user

Not applicable.

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

Not applicable.

UN "Model Regulation":

not regulated

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**Directive 2012/18/EU****Named dangerous substances - ANNEX I** Substance is not listed.**REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3**15.2 Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

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SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity – Category 4

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