

Material Safety Data Sheet

According to regulation (EC) No. 1907/2006 (REACH)



70910 Mono-Ethylene Glycol

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Revised edition: 02.09.2015

Version: 6.2

Printed: 27.04.2016

1. Identification of the Substance/Mixture and of the Company/Undertaking

1.1. Product Identifier

Product Name: Mono-Ethylene Glycol

Article No.: 70910

1.2. Relevant identified Uses of the Substance or Mixture and Uses advised against

Identified uses:

Industrial application.

Uses advised against:

1.3. Details of the Supplier of the Safety Data Sheet (Producer/Importer)

Company: Kremer Pigmente GmbH & Co. KG

Address: Hauptstr. 41-47, 88317 Aichstetten, Germany

Tel./Fax.: Tel +49 7565 914480, Fax +49 7565 1606

Internet: www.kremer-pigmente.de

E-Mail: info@kremer-pigmente.de

Importer: --

1.4. Emergency No.

Emergency No.: +49 7565 914480 (Mon-Fri 8:00 - 17:00)

2. Hazards Identification

2.1. Classification of the Substance or Mixture

Classification according to EC Regulation 1272/2008

H302	Acute toxicity (oral), hazard category 4
Cat.: 4	Specific target organ toxicity (repeated exposure), category 2
H373	Harmful if swallowed.
Cat.: 2	May cause damage to organs through prolonged or repeated exposure.

Classification according to EC Regulation No. 67/548 or No. 1999/45

Harmful (Xn)	R22	Harmful if swallowed.
	R48	Danger of serious damage to health by prolonged exposure.

Safety Phrases:

Possible Environmental Effects:

See Section 12.

2.2. Label Elements

Classification according to EC Regulation 1272/2008

Hazard designation:

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GHS08

Signal word:

Warning

Hazard designation:

H302

Harmful if swallowed.

H373

May cause damage to organs through prolonged or repeated exposure.

Safety designation:

P260

Do not breathe dust/fume/gas/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 or physician if you feel unwell.

P314

Get medical advice/attention if you feel unwell.

P330

Rinse mouth.

Hazardous components for labelling:

Ethandiol

2.3. Other Hazards

3. Composition/Information on Ingredients

3.1. Substance

This product is a substance: see details under 3.2.

3.2. Mixture

Chemical Characterization:

Hazardous Ingredients:

Ethane-1,2-diol (Xn; R22; H302-373), REACH 01-2119456816-28-xxxx

100 %

CAS-Nr: 107-21-1

EINECS-Nr: 203-473-3

EC-Nr: 603-027-00-1

Additional information:

4. First Aid Measures

4.1. Description of the First Aid Measures

General information:

Give artificial respiration in case breathing is not regular or if it has stopped.

Intoxication symptoms may occur after several hours, therefore a 48 hour medical observation is necessary.

After inhalation:

Supply fresh air or give oxygen.

In case of unconsciousness place patient stable in side position for

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transportation.

Give artificial respiration in case breathing is not regular or if it has stopped.

After skin contact:

Wash off with plenty of water and soap.

Remove contaminated clothing immediately.

After eye contact:

Rinse open eye for several minutes under running water. Should irritation continue, seek medical advice.

After ingestion:

Rinse mouth with water and drink plenty of water.

Do not induce vomiting.

Never give anything by mouth to an unconscious person.

Immediately get medical help.

4.2. Most important Symptoms and Effects, both Acute and Delayed

Symptoms:

Swallowing: may cause vomiting, headache, dizziness, impaired vision, unconsciousness, decreased blood pressure, accelerated respiration, muscle tremors, gastrointestinal disorders.

Effects:

Harmful if swallowed.

4.3. Indication of any Immediate Medical Attention and special Treatment needed

Treatment:

Treat symptomatically.

5. Fire-Fighting Measures

5.1. Extinguishing Media

Suitable extinguishing media:

Water mist, extinguishing powder, foam, carbon dioxide.

Unsuitable extinguishing media:

Water with full jet.

5.2. Special Hazards arising from the Substance or Mixture

Special hazards:

In case of fire: formation of toxic pyrolysis products.

In case of fire: formation of carbon monoxide and dioxide.

5.3. Advice for Firefighters

Protective equipment:

Wear suitable protective clothing.

Wear suitable protective clothing.

Further information:

Collect contaminated extinguishing water and debris separately; avoid contamination of sewage system.

Cool closed containers exposed to fire with water mist.

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6. Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Personal precautions:

*Wear appropriate protective equipment. Keep spectators away.
Keep away from sources of ignition. No smoking.
Avoid contact with skin and eyes. Do not ingest or inhale.*

6.2. Environmental Precautions

Environmental precautions:

*Contact local authorities if product pollutes soil or vegetation.
Prevent contamination of soils, drains and surface water.*

6.3. Methods and Material for Containment and Cleaning Up

Methods and material:

Contain with non-flammable absorbent material (e.g. sand, diatomaceous earth, vermiculite) and dispose accordingly.

6.4. Reference to other Sections

Protective clothing, see Section 8.

7. Handling and Storage

7.1. Precautions for Safe Handling

Instructions on safe handling:

The usual precautionary measures are to be adhered to when handling chemicals.

Provide adequate ventilation.

A nearby eyewash facility should be available for emergencies.

Hygienic measures:

Take off contaminated clothing immediately.

Do not inhale gas/fumes/vapours/aerosols.

Keep away from foodstuffs and drinks. Do not eat, drink or smoke during work. Wash hands before breaks and at the end of work.

7.2. Conditions for Safe Storage, including any Incompatibilities

Storage conditions:

Store the product in the original container.

Store product in a cool, dry and well ventilated area.

Protect against humidity and water.

Product is hygroscopic.

Requirements for storage areas and containers:

Store in a room with a solvent-proof floor.

Information on fire and explosion protection:

Do not store together with: oxidants.

Keep away from sources of ignition - do not smoke. Take measures to prevent electrostatic discharge.

Fire class: average (Flp > 100°C)

Storage class (VCI):

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10; Combustible liquids

Further Information:

Product is hygroscopic.

7.3. Specific End Use(s)

Further information:

8. Exposure Controls/Personal Protection

8.1. Parameters to be Controlled

Parameters to be controlled (DE):

Ethylene glycol, CAS 107-21-1: TLV (D) 26 mg/m³; 10 ppm; 2(l); DFG, H, Y

Y: No teratogenic risk when the exposure limit values (ELV) and biological limit values (BLV) are adhered to.

TRGS 900, Skin designation: can be absorbed by skin.

Parameters to be controlled:

Ethandiol, CAS 107-21-1

ELV (EC): Short Term Exposure Limit (STEL): 104 mg/m³, 40 ppm

ELV (EC): Longterm value (TWA): 52 mg/m³, 20 ppm (skin)

Derived No-Effect Level (DNEL):

35 mg/kg (worker, inhalation, long-term exposition - local effects)

106 mg/kg (worker, skin contact, long-term exposition - systemic effects)

7 mg/kg (consumer, inhalation, long-term exposition - local effects)

53 mg/kg (consumer, skin contact, long-term exposition - systemic effects)

Predicted No-Effect Concentration (PNEC):

Fresh water: 10 mg/l

Fresh water sediment: 20.9 mg/kg

Seawater: 1 mg/l

Sporadic release: 10 mg/l

Soil: 1.53 mg/kg

Sewage treatment system (STP): 199.5 mg/l

Additional Information:

8.2. Exposure Controls

Technical protective measures:

No further measures, see Section 7.

Personal Protection

General protective measures:

Remove contaminated clothing immediately.

Keep away from foodstuffs and drinks. Do not eat, drink or smoke during work. Wash hands before breaks and at the end of work.

Avoid contact with eyes and skin.

Respiratory protection:

Respiratory equipment required in case of insufficient ventilation,

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filter combination type A-P2.

Hand protection:

Protective gloves (EN 374)

Protective glove material:

Chloroprene rubber (> 480 min, > 0.5 mm).

Nitrile rubber (480 min, 0.4 mm)

Butyl rubber (480 min, 0.7 mm).

Eye protection:

Tightly fitting safety goggles (EN 166).

Body protection:

Protective clothing.

Environmental precautions:

*Prevent contamination of open water ways and sewage system.
Avoid contamination of ground water.*

9. Physical and Chemical Properties

9.1. Information on Basic Physical and Chemical Properties

<i>Form:</i>	<i>viscous</i>
<i>Color:</i>	<i>colorless</i>
<i>Odor:</i>	<i>none</i>
<i>Odor threshold:</i>	<i>No information available.</i>
<i>pH-Value:</i>	<i>6.5 - 7 (100 g/l; 20°C)</i>
<i>Melting temperature:</i>	<i>-13°C</i>
<i>Boiling temperature:</i>	<i>197.4°C (1013 hPa)</i>
<i>Flash point:</i>	<i>111°C (DIN 51758)</i>
<i>Evaporation rate:</i>	<i>No information available.</i>
<i>Flammability (solid, gas):</i>	<i>not applicable</i>
<i>Upper explosion limit:</i>	<i>28 Vol. %</i>
<i>Lower explosion limit:</i>	<i>3.2 Vol. %</i>
<i>Vapor pressure:</i>	<i>1.123 hPa (25°C)</i>
<i>Vapor density:</i>	<i>No information available.</i>
<i>Density:</i>	<i>1.11 g/cm³</i>
<i>Solubility in water:</i>	<i>completely miscible</i>
<i>Coefficient of variation (n-Octanol/Water):</i>	<i>-1.36 logKOW (23°C)</i>
<i>Auto-ignition temperature:</i>	

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Product is not auto-ignitable.

Decomposition temperature: > 200°C

Viscosity, dynamic: 16.1 mPa.s (25°C)

Explosive properties:

Product does not present an explosion hazard.

Oxidizing properties:

none

Bulk density:

not determined

9.2. Further Information

Solubility in solvents:

Soluble in polar solvents.

Viscosity, kinematic

Burning class:

Solvent content:

Solid content:

Particle size:

Other information:

10. Stability and Reactivity

10.1. Reactivity

Stable if used according to specifications.

10.2. Chemical Stability

Product is hygroscopic.

10.3. Possibility of Hazardous Reactions

None if used according to specifications.

10.4. Conditions to Avoid

Conditions to avoid:

Avoid contact with heat, sparks and open fire.

Avoid temperatures above 40°C, and protect from humidity and water.

Protect from light.

Thermal decomposition:

> 200°C

10.5. Incompatible Materials

Strong acids, bases and oxidizing agents.

Inflammable products.

10.6. Hazardous Decomposition Products

Carbon monoxide.

Carbon dioxide.

10.7. Further Information

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11. Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity

LD50, oral: *LDLo: ca. 1600 mg/kg (human)*

LD50, dermal: *> 3500 mg/kg (mouse)*

LC50, inhalation: *> 2.5 mg/l (6h; rat) (aerosol)*

Primary effects

Irritant effect on skin:

Non irritating (rabbit)

Irritant effect on eyes:

Non-irritating to eyes (rabbit)

Inhalation:

No information available.

Ingestion:

No information available

Sensitization:

Experience with humans: no sensitizing effect.

Mutagenicity:

In vitro genetic-toxicity:

No mutagenic effects observed.

Reproductive toxicity:

Animal studies showed no adverse effect on the fertility.

Cancerogenicity:

No cancerogenic effect (in animal studies).

Teratogenicity:

Toxic effects are caused in the mother animal and in the fetus when large amounts are intaken during pregnancy.

Specific target organ toxicity (STOT):

Single exposure: no information available.

Repeated exposure: can cause damage to kidneys after repeated or prolonged exposure (swallowing, skin contact).

Additional toxicological information:

Organic solvent.

Repeated and ongoing contact with the solvent can cause brain and nerve damage.

Kidney damage is possible.

Swallowing: harmful.

12. Ecological Information

12.1. Aquatic Toxicity

Fish toxicity:

LC50: 72860 mg/l (96h, Pimephales promelas)

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NOEC: 15380 mg/l (7d, Pimephales promelas)

Daphnia toxicity:

EC50: > 100 mg/l (48h, Daphnia magna; OECD 202)

NOEC: 8590 mg/l (7d, Ceriodaphnia Dubia)

Bacteria toxicity:

EC20: > 1995 mg/l (30min, active sludge) (ISO 8192)

Algae toxicity:

EC50: 6500 - 13000 mg/l (96h, Selenastrum capricornutum)

12. 2. Persistency and Degradability

90-100 %; readily biodegradable (OECD 301A)

12. 3. Bioaccumulation

No bioaccumulation expected.

12. 4. Mobility

No accumulation expected according to the coefficient of variation n-octanol/water (logPow).

12. 5. Results of PBT- und vPvP Assessment

This substance is not classified as PBT (persistent, bioaccumulative, toxic), nor as vPvB (very persistent, very bioaccumulative).

12. 6. Other Adverse Effects

Water hazard class:

1 (German Regulation) (Assessment by list): slightly hazardous.

Behaviour in sewage systems:

Further ecological effects:

Biochemical oxygen demand (BOD5): 1245 mg/g

AOX Value:

13. Disposal Considerations

13. 1. Waste Treatment Methods

Product:

*Dispose of according to official national and local regulations.
Must not be disposed together with household garbage.*

European Waste Code (EWC):

The waste code is determined according to the kind of waste and industry stated in the European Waste Catalogue.

Uncleaned packaging:

Dispose of according to official local regulations.

Uncontaminated packaging may be recycled.

Packaging may be disposed of in the same manner as the product.

Waste Code No.:

14. Transport Information

14. 1. UN Number

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ADR, IMDG, IATA

14.2. UN Proper Shipping Name

ADR/RID:

No hazardous goods according to ADR (land transportation).

IMDG/IATA:

No hazardous goods according to IMDG.

14.3. Transport Hazard Classes

ADR Class:

not applicable

Hazard no.:

Classification code:

Tunnel no.:

IMDG Class (sea):

Hazard no.:

EmS No.:

IATA Class:

not applicable

Hazard no.:

14.4. Packaging Group

ADR/RID:

not applicable

IMDG:

IATA:

14.5. Environmental Hazards

None

14.6. Special Precautions for User

Not classified as a dangerous good under transport regulations.

14.7. Transportation in Bulk according to Annex II of MARPOL 73/78 and IBC-Code

IMDG: not applicable

14.8. Further Information

15. Regulatory Information

15.1. Safety, Health and Environmental Regulations/Legislation specific for the Substance or Mixture

Water hazard class:

1, slightly hazardous for water

Local regulations on chemical accidents:

Does not underlie the Accident Ordinance.

Employment restrictions:

The employment restrictions for young workers in accordance with the Youth Employment Protection Law (94/33/EC) are to be

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observed.

The employment restrictions for expectant and nursing mothers in accordance with the Maternity Protection Guideline (94/85/EEC) are to be observed.

Restriction and prohibition of application:

Technical instructions on air quality:

15.2. Chemical Safety Assessment

A Chemical Safety Assessment has been carried out for this product.

15.3. Further Information

Listed in:

EINECS (203-473-3), TSCA, AICS (AUS), DSL, INV (CA), ENCS-ISHL (JP)((2)-230), JEX (JP)((2)-2267), KECI (KR)(KE-13169), PICCS (PH), NZ CLSC (NZ), IECSC (CN)

EC. Regulation No. 1451/2007 (Biocide), Annex I, Substances identified as existing (OJ (L325). Registered under EC Number 203-473-3.

16. Other Information

This product should be stored, handled and used in accordance with good hygiene practices and in conformity with any legal regulations. This information contained herein is based on the present state of knowledge and is intended to describe our product from the point of view of safety requirements. It should be therefore not be construed as guaranteeing specific properties.