

Safety Data Sheet

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



64721 Triethanolamine (99 %)

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Revised edition: 10.01.2019

Version: 4.0

Printed: 04.11.2020

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

1.1. Product Identifier

Product Name: Triethanolamine (99 %)

Article No.: 64721

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.com

E-Mail: info@kremer-pigmente.com

Importer: --

1.4. Emergency No.

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

1.4.2 Poison Center:

2. Hazards Identification

2.1. Classification of the Substance or Mixture

Classification according to Regulation (EC) No. 1272/2008 (CLP/GHS)

This product does not require classification and labelling as hazardous according to CLP/GHS.

Possible Environmental Effects:

2.2. Label Elements

Classification according to Regulation (EC) No. 1272/2008 (CLP/GHS)

This product does not require classification and labelling as hazardous according to CLP/GHS.

Hazard designation:

Signal word:

Hazard designation:

Safety designation:

Hazardous components for labelling:

2.3. Other Hazards

3. Composition/Information on Ingredients

3.1. Substance

Mixture

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3.2.

Chemical Characterization: C₆H₁₅NO₃

Information on Components / Hazardous Ingredients:

Does not contain any hazardous components according to EC Guidelines 1272/2008.

2,2',2''-Nitrilotriethanol; REACH Reg. No. 01-2119486482-32-xxxx

100 %

CAS-Nr: 102-71-6

EINECS-Nr: 203-049-8

EC-Nr:

Additional information:

4. First Aid Measures

4.1. Description of the First Aid Measures

General information:

Remove contaminated clothes immediately.

After inhalation:

Supply fresh air.

Consult physician if symptoms persist.

After skin contact:

Wash with soap and rinse with plenty of water.

If symptoms persist, consult a physician.

After eye contact:

Rinse open eye for several minutes under running water.

Seek medical attention if irritation persists.

After ingestion:

Rinse mouth with water and drink plenty of water.

Never give anything by mouth to an unconscious person.

Do not induce vomiting.

If symptoms persist, call a physician.

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

Symptoms:

No further information available.

Effects:

No further information available.

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.

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5.2. Special Hazards arising from the Substance or Mixture

Special hazards:

Incomplete combustion can cause the formation of toxic pyrolysis products.

In case of fire: formation of carbon oxides, nitrogen oxides.

5.3. Advice for Firefighters

Protective equipment:

Wear suitable protective clothing.

Wear self-contained respiratory protective device.

Further information:

Avoid contamination of sewage system, open water ways and ground water.

Cool closed containers exposed to fire with water mist.

6. Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Personal precautions:

Wear protective clothing.

Ensure adequate ventilation.

Avoid contact with eyes and skin.

6.2. Environmental Precautions

Environmental precautions:

Prevent contamination of soils, drains and surface water.

6.3. Methods and Material for Containment and Cleaning Up

Methods and material:

Contain with absorbent material (sand, diatomaceous earth, acid binder, universal absorbent) 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:

Provide adequate ventilation.

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

Hygienic measures:

Avoid contact with eyes and skin.

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 in tightly sealed containers in a dry and cool room.

Protect from frost.

Protect from direct exposure to light.

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Requirements for storage areas and containers:

*Unsuitable container material: aluminium, copper, copper alloys.
Suitable container material: stainless steel*

Information on fire and explosion protection:

*Combustible material.
Keep away from sources of ignition - do not smoke.
Do not store together with: oxidants.
Do not store together with: acids.*

Storage class:

10; Combustible liquids (TRGS 510)

Further Information:

7.3. Specific End Use(s)

Further information:

No information available.

8. Exposure Controls/Personal Protection

8.1. Parameters to be Controlled

Parameters to be controlled (DE):

*TRGS 900
TLV: 1 mg/m³ (inhalable fraction)*

Parameters to be controlled:

Derived No-Effect Level (DNEL):

*5 mg/m³ (worker, inhalation, long-term exposition - systemic and local effects)
6.3 mg/kg bw/d (worker, skin contact, long-term exposition - systemic effects)
1.25 mg/m³ (consumer, inhalation, long-term exposition - systemic and local effects)
3.1 mg/m³ bw/d (consumer, skin contact, long-term exposition - systemic effects)
13 mg/m³ bw/d (consumer, swallowing, long-term exposition - systemic effects)*

Predicted No-Effect Concentration (PNEC):

*Fresh water: 0.32 mg/l
Sea water: 0.032 mg/l
Fresh water sediment: 1.7 mg/kg
Sea water sediment: 0.17 mg/kg
Sporadic release: 5.12 mg/l
Sewage treatment system (STP): 10 mg/l
Soil: 0.151 mg/kg*

Additional Information:

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

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8.2. Exposure Controls

Technical protective measures:

Technical protective measures have priority to personal protective measures.

Personal Protection

General protective measures:

Remove contaminated clothing. Wash hands after work.

Respiratory protection:

In case of formation of dust/vapor.

Recommended: composite filter A-P2 (EN 141)

Hand protection:

Protective gloves (EN 374)

Protective glove material:

Natural rubber (480 min, 0.5 mm)

Nitrile rubber (480 min, 0.35 mm)

Chloroprene rubber (> 480 min, 0.5 mm)

Butyl rubber (480 min; 0.5 mm).

Fluoro carbon rubber - FKM (480 min; > 0.4 mm).

Polyvinyl chloride (> 480 min, 0.5 mm)

Eye protection:

Safety glasses (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

Form: liquid

Color: colorless to pale yellow

Odor: ammonium-like

Odor threshold:

No information available.

pH-Value:

not available

Melting temperature:

20.5°C

Boiling temperature:

336.1°C (1013 hPa)

Flash point:

179°C

Evaporation rate:

0.01 (Butylacetat=1)

Flammability (solid, gas):

not applicable

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<i>Upper explosion limit:</i>	7.2 Vol.%
<i>Lower explosion limit:</i>	3.6 Vol.%
<i>Vapor pressure:</i>	0.0003 hPa (21°C)
<i>Vapor density:</i>	5.14
<i>Density:</i>	1.125 g/cm ³ (20°C)
<i>Solubility in water:</i>	miscible
<i>Coefficient of variation (n-Octanol/Water):</i>	-2.3 logKOW (25°C, pH 7.1)
<i>Auto-ignition temperature:</i>	324°C
<i>Decomposition temperature:</i>	No data available.
<i>Viscosity, dynamic:</i>	934 mPa.s (20°C)
<i>Explosive properties:</i>	Product does not present an explosion hazard.
<i>Oxidizing properties:</i>	not oxidizing
<i>Bulk density:</i>	not applicable

9.2. Further Information

Solubility in solvents:
Viscosity, kinematic:
Burning class:
Solvent content:
Solid content:
Particle size:
Other information:

Molecular weight: 149.19 g/mol

10. Stability and Reactivity

10.1. Reactivity

No decomposition if used according to specifications.

10.2. Chemical Stability

*Stable if used according to specifications.
Decomposes when exposed to light.*

10.3. Possibility of Hazardous Reactions

*Vigorous reactions with strong oxidants.
Exothermic reaction with acids.
Amines can form carcinogenic nitrosamines.*

10.4. Conditions to Avoid

Conditions to avoid:

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Avoid contact with heat, sparks and open fire.

Protect from air humidity and water.

Product is hygroscopic.

Thermal decomposition:

Avoid heat.

10.5. Incompatible Materials

Oxidizing agents, reducing agents, acids, acid anhydrides, acid halides, metals, water, metal hydrides.

10.6. Hazardous Decomposition Products

In case of fire: formation of carbon oxides, nitrogen oxides (NOx)

10.7. Further Information

11. Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity

LD50, oral: 6400 mg/kg (rat, m/f; OECD 401)

LD50, dermal: > 2000 mg/kg (rabbit; OECD 402)

LC50, inhalation: LC0: 1.8 mg/l (8h; rat m/f; OECD 403)

Primary effects

Irritant effect on skin:

Non irritating (4h, rabbit; OECD 404)

Irritant effect on eyes:

Non-irritating to eyes (rabbit; OECD 405)

Inhalation:

No information available.

Ingestion:

No information available

Sensitization:

Non sensitizing (guinea pig; OECD 406).

Mutagenicity:

In vitro genetic toxicity: Bacterial Reverse Mutation Test (Salmonella typhimurium; OECD 471): negative

In vitro Mammalian Cell Gene Mutation Test (OECD 476): negative

In vitro Mammalian Chromosomal Aberration Test (ovaries of the chin. hamster (CHO): OECD 473): negative

Reproductive toxicity:

NOAEL parent: > 1000 mg/kg bw/d (rat; OECD 421)

NOAEL F1: 300 mg/kg bw/d (rat; OECD 421)

NOAEL fertility: > 1000 mg/kg bw/d (rat; OECD 421)

Carcinogenicity:

NOAEL: 250 mg/kg bw/d (rat m/f; 103 weeks, 5 days/week; OECD 453)

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Teratogenicity:

NOAEL: > 1000 mg/kg bw/d (maternal, rat, oral; OECD 421)

NOAEL: 300 mg/kg bw/d (developmental, rat; OECD 421)

Specific target organ toxicity (STOT):

Repeated exposure:

NOAEL (Oral): 1000 mg/kg bw/d (rat m/f, 91 days; OECD 408): no negative effects

NOAEL (Dermal): 125 mg/kg (rat m, 90 days; OECD 411): change of the body weight

NOAEL (Inhalation): 0.5 mg/l (rat m/f, 28 days; OECD 412): no negative effects

Additional toxicological information:

12. Ecological Information

12.1. Aquatic Toxicity

Fish toxicity:

LC50: > 10000 mg/l (48h, *Leuciscus idus*)

Daphnia toxicity:

EC50: 609.88 mg/l (48h, *Ceriodaphnia dubia*)

NOEC: 16 mg/l (21d, *Daphnia magna*; OECD 211)

Bacteria toxicity:

IC50: > 1000 mg/l (3h; active sludge; OECD 209)

Algae toxicity:

EC50: 512 mg/l (72h, *Desmodesmus subspicatus*)

EC50: 216 mg/l (72h, *Desmodesmus subspicatus*)

12.2. Persistency and Degradability

Photodegradation (direct photolysis): < 1 % (half-life value air), decomposes fast under light influence

100 % (21d); readily biodegradable (OECD 301E)

12.3. Bioaccumulation

log KOW: -2.3 (25°C, pH Value 7.1)

Bioconcentration factor (BCF): < 0.4 (2.5 mg/l, 42d, *Cyprinus carpio* (carp); OECD 305), no bioaccumulation expected

Bioconcentration factor (BCF): < 3.9 (0.25 mg/l, 42d, *Cyprinus carpio* (carp); OECD 305)

12.4. Mobility

Product is water soluble.

Air: highly volatile liquid

Mobile in soil.

log Koc: 1 (calculated)

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, slightly hazardous

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Do not let product contaminate ground water, waterways or sewage system.

Behaviour in sewage systems:

Further ecological effects:

AOX Value:

13. Disposal Considerations

13.1. Waste Treatment Methods

Product:

Do not mix with other waste.

Special disposal required according to local regulations.

Do not let product enter water systems.

European Waste Code (EWC):

Uncleaned packaging:

Contaminated packaging must be disposed like the substance.

Uncontaminated packaging may be recycled. Completely empty packaging can be disposed of with the regular waste.

Waste Code No.:

14. Transport Information

14.1. UN Number

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 restriction code:

IMDG Class (sea):

Hazard no.:

EmS No.:

IATA Class:

Hazard no.:

14.4. Packaging Group

ADR/RID:

not applicable

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IMDG:

IATA:

14.5. Environmental Hazards

None

14.6. Special Precautions for User

not applicable

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

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 (German Regulation)

Local regulations on chemical accidents:

Does not underlie the Accident Ordinance.

Employment restrictions:

The employment restrictions for expectant and nursing mothers, and for young workers are to be observed.

Restriction and prohibition of application:

EC. REACH, Section XVII, Restrictions on the Manufacture, Placing on the Market and Use of Certain Dangerous Substances, Preparations and Articles: not applicable

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 the following inventories:

EINECS (203-049-8), TSCA, AICS (AUS), DSL (CA), ENCS/ISHL/JEX (JP)(2)-308, KECI (KR) KE-25940, PICCS (PH), INV/IECSC (CN), NZIoC (NZ) HSR002785

Regulation (EC) 649/2012 concerning the export and import of dangerous chemicals: Not applicable

Regulation (EC) No. 428/2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items, Annex I, Cat. 1C: Section 1C350

EC. Regulation No. 1451/2007 (Biocide), Annex I, Substances identified as existing (OJ (L325). Registered under EC Number 203-049-8

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.