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## 1. Substance/preparation and company identification

Company
BASF CORPORATION
100 Campus Drive
Florham Park, NJ 07932, USA

24 Hour Emergency Response Information CHEMTREC: 1-800-424-9300

BASF HOTLINE: 1-800-832-HELP

Molecular formula: CHO(CH2)3CHO
Molecular weight: 100 g/mol
Chemical family: dialdehydes

Synonyms: GLUTARALDEHYDE

## 2. Composition/information on ingredients

CAS Number Content (W/W) Chemical name

7732-18-5 75.0 % Water 111-30-8 25.0 % glutaral

## 3. Hazard identification

## **Emergency overview**

DANGER: CAUSES IRREVERSIBLE EYE DAMAGE.

HARMFUL IF INHALED.

CAUSES ASTHMATIC SIGNS AND SYMPTOMS IN HYPER-REACTIVE INDIVIDUALS.

HARMFUL IF SWALLOWED.

HARMFUL IF ABSORBED THROUGH SKIN.

CAUSES SKIN IRRITATION.

MAY CAUSE ALLERGIC SKIN REACTION. Do not get in eyes, on skin, or on clothing.

Avoid inhalation of mists/vapours.

Provide local exhaust ventilation to control vapours/mists.

Wear NIOSH-certified chemical goggles. Wear chemical resistant protective gloves.

Wear protective clothing.

Eye wash fountains and safety showers must be easily accessible.

## Potential health effects

## Primary routes of exposure

Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquified gases.

#### Acute toxicity:

Ingestion may cause moderate to severe gastrointestinal irritation and ulceration including nausea and vomiting and pain. Inhalation of aerosols may cause respiratory tract irritation and pulmonary inflammation.

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#### Irritation:

Causes burns. Risk of serious damage to eyes.

#### Sensitization:

May cause sensitization by inhalation and skin contact.

#### Medical conditions aggravated by overexposure:

Contact may aggravate pulmonary disorders.

## Potential environmental effects

## Aquatic toxicity:

Acutely toxic for aquatic organisms.

Depending on local conditions and existing concentrations, disturbances in the biodegradation process of activated sludge are possible.

## 4. First-aid measures

#### **General advice:**

Remove contaminated clothing.

#### If inhaled:

Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary. Immediate medical attention required.

#### If on skin:

Wash affected areas thoroughly with soap and water. Immediate medical attention required.

#### If in eyes:

In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. Immediate medical attention required.

## If swallowed:

Immediately rinse mouth and then drink plenty of water, do not induce vomiting, seek medical attention. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions.

#### Note to physician

Treatment:

Treat according to symptoms (decontamination, vital functions), no known specific antidote, administer corticosteroid dose aerosol to prevent pulmonary odema.

## 5. Fire-fighting measures

Flash point: Not applicable Autoignition: > 275 °C (DIN 51794)

#### Suitable extinguishing media:

water, carbon dioxide, dry extinguishing media, foam

## Hazards during fire-fighting:

toxic gases/vapours

### Protective equipment for fire-fighting:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

## **NFPA Hazard codes:**

Health: 3 Fire: 1 Reactivity: 0 Special:

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## 6. Accidental release measures

#### Personal precautions:

Use personal protective clothing.

#### **Environmental precautions:**

Do not discharge into drains/surface waters/groundwater.

#### Cleanup:

Spills should be contained, solidified, and placed in suitable containers for disposal.

For small amounts: Pick up with absorbent material (e.g. sand, sawdust, general-purpose binder). Dispose of absorbed material in accordance with regulations.

For large amounts: Pump off product.

#### **Further information:**

Pack in tightly closed containers for disposal.

## 7. Handling and storage

## **Handling**

#### General advice:

Keep away from sources of ignition - No smoking. Handle in accordance with good industrial hygiene and safety practice. Keep container tightly sealed.

#### **Storage**

#### General advice:

Store protected against freezing.

## Storage incompatibility:

General: Segregate from acids, alkalies or combustible materials. Segregate from oxidizing agents. Segregate from incompatible substances.

## 8. Exposure controls and personal protection

## Components with workplace control parameters

glutaral

ACGIH CLV 0.05 ppm;

#### Advice on system design:

Provide local exhaust ventilation to control vapours/mists.

## Personal protective equipment

## Respiratory protection:

Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator.

#### Hand protection:

Chemical resistant protective gloves

#### Eye protection:

Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

## **Body protection:**

Body protection must be chosen based on level of activity and exposure.

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## General safety and hygiene measures:

Eye wash fountains and safety showers must be easily accessible. Wear protective clothing as necessary to prevent contact. Avoid inhalation of vapours/mists. Keep away from food, drink and animal feeding stuffs. Avoid contact with skin and eyes. Remove contaminated clothing. Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

Form: liquid

Odour: characteristic
Colour: yellow
pH value: approx. 3.6

Freezing point: approx. -5  $^{\circ}$ C (1 ATM) Boiling point: > 100  $^{\circ}$ C (1 ATM)

Vapour pressure: approx. 17.5 (20 °C) The product has not been tested. The statement has been derived from the

The statement has been derived from the properties of the individual components.

Density: 1.06 g/cm3 (20 °C) Relative density: 1.06 (20 °C)

Partitioning coefficient n- -0.36 (23 °C) (OECD Guideline 107)

octanol/water (log Pow):

Solubility in water: soluble

## 10. Stability and reactivity

#### Substances to avoid:

acids, bases

## Hazardous reactions:

The product is chemically stable.

## **Decomposition products:**

Hazardous decomposition products: carbon monoxide, carbon dioxide

#### Thermal decomposition:

No data available.

#### Corrosion to metals:

Corrosive effect on metals.

## 11. Toxicological information

## **Acute toxicity**

Oral:

LD50/rat: approx. 320 mg/kg (BASF-Test)

Inhalation:

LC50/rat: > 0.28 - < 0.39 mg/l / 4 h

The data refer to a diluted watery solution of the substance.

rat: / 1 h(IRT)

No Mortality within the stated exposition time as shown in animal studies, however, deaths occurred after longer exposure.

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#### Dermal:

LD50/rat: > 2,000 mg/kg

The data refer to a diluted watery solution of the substance.

#### Skin irritation:

rabbit: Irritant. (Draize test)

#### Eye irritation:

rabbit: Severely irritating. (Draize test)

#### Sensitization:

Open epicutaneous test (OET)/guinea pig: sensitizing The data refer to a diluted watery solution of the substance. Literature data.

#### **Chronic toxicity**

#### Genetic toxicity:

The substance was mutagenic in various test systems with bacterias and cell cultures; however, these results could not be confirmed in tests with mammals.

## Carcinogenicity:

In long-term animal studies in which the substance was given in the drinking water in high concentrations, a carcinogenic effect was not observed.

#### Reproductive toxicity:

Animal studies gave no indication of a fertility impairing effect at doses which were not toxic to the parental animals.

## Developmental toxicity/teratogenicity:

No indications of a developmental toxic / teratogenic effect were seen in animal studies.

## 12. Ecological information

#### **Environmental fate and transport**

## **Biodegradation:**

Test method: OECD 301 A (new version) (aerobic), activated sludge, domestic

Method of analysis: DOC reduction
Degree of elimination: 90 - 100 % (28 d)

Evaluation: Readily biodegradable (according to OECD criteria).

Readily biodegradable (according to OECD criteria).

### Bioaccumulation:

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

## **Environmental toxicity**

## Acute and prolonged toxicity to fish:

See user defined text. static

sunfish, bluegill/LC50 (96 h): 13 mg/l

The details of the toxic effect relate to the nominal concentration.

#### Acute toxicity to aquatic invertebrates:

Directive 84/449/EEC, C.2 static

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Daphnia magna/EC50 (48 h): 29.73 mg/l

The details of the toxic effect relate to the nominal concentration.

## Toxicity to aquatic plants:

OECD Guideline 201 static

green algae/EC50 (72 h): 1.20 mg/l

The statement of the toxic effect relates to the analytically determined concentration.

## Toxicity to microorganisms:

bacteria (17 h): 13.3 mg/l

## 13. Disposal considerations

#### Waste disposal of substance:

Dispose of in accordance with national, state and local regulations.

It is the waste generator's responsibility to determine if a particular waste is hazardous under RCRA.

#### Container disposal:

Dispose of in a licensed facility. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

## 14. Transport information

## Land transport

**USDOT** 

Not classified as a dangerous good under transport regulations

## Sea transport

**IMDG** 

Not classified as a dangerous good under transport regulations

## Air transport

IATA/ICAO

Not classified as a dangerous good under transport regulations

## 15. Regulatory information

### **Federal Regulations**

Registration status:

TSCA, US released / listed

**OSHA hazard category:** Highly toxic - inhalation

Acute target organ effects reported, Skin and/or eye irritant, Toxic - oral,

SARA hazard categories (EPCRA 311/312): Acute

#### State regulations

State RTK

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(30174147/MD3\_GEN\_03/EN\_

 CAS Number
 Chemical name
 State RTK

 111-30-8
 glutaral
 MA, NJ, PA

## 16. Other information

**HMIS III rating** 

Health: 3¤ Flammability: 1 Physical hazard: 0

HMIS uses a numbering scale ranging from 0 to 4 to indicate the degree of hazard. A value of zero means that the substance possesses essentially no hazard; a rating of four indicates high hazard.

#### Local contact information

prod\_reg@basf.com

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