

Safety Data Sheet

Protectol® GA 50

Revision date : 2010/08/02

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Version: 3.1

(30136889/SDS_GEN_US/EN)

1. Product and Company Identification

Use: preserving agent and disinfectant

CompanyBASF CORPORATION
100 Campus Drive
Florham Park, NJ 07932, USA24 Hour Emergency Response InformationCHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP

Molecular formula:	CHO(CH ₂) ₃ CHO
Chemical family:	dialdehydes
Synonyms:	Glutaraldehyde

2. Hazards Identification

Emergency overview**CAUTION:**

Toxic by inhalation, in contact with skin and if swallowed.

Causes burns.

May cause sensitization by inhalation.

Wear protective clothing.

Wear full face shield if splashing hazard exists.

Avoid inhalation of mists/vapours.

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

Ensure adequate ventilation.

State of matter: liquid
Colour: colourless to yellow
Colour: yellow
Odour: pungent odourPotential 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:

Of high toxicity after short-term inhalation. Of high toxicity after single ingestion. Of low toxicity after short-term skin contact.

Irritation / corrosion:

Corrosive! Damages skin and eyes. May cause severe damage to the eyes.

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Sensitization:

The substance may cause sensitization of the respiratory tract. Sensitization after skin contact possible.

Chronic toxicity:

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.

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

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

Medical conditions aggravated by overexposure:

Data available do not indicate that there are medical conditions that are generally recognized as being aggravated by exposure to this substance/product. See MSDS section 11 - Toxicological information.

Potential environmental effects

Aquatic toxicity:

The product has not been tested. The data have been deduced from values for a preparation or mixture with a lower substance concentration.

3. Composition / Information on Ingredients

<u>CAS Number</u>	<u>Content (W/W)</u>	<u>Chemical name</u>
111-30-8	50.0 %	glutaral
7732-18-5	50.0 %	Water

4. First-Aid Measures

General advice:

Immediately remove contaminated clothing. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). First aid personnel should pay attention to their own safety.

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 with water while removing contaminated clothing. Seek medical attention.

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:

Rinse mouth and then drink plenty of water. Do not induce vomiting. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Immediate medical attention required.

Note to physician

Treatment:

Treat according to symptoms (decontamination, vital functions), no known specific antidote. Pulmonary odema prophylaxis. Medical monitoring for at least 24 hours.

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5. Fire-Fighting Measures

Flash point:	95 °C	(50 %(m)) (other, closed cup) No flash point - Measurement made up to the indicated temperature, pilot light extinguishes.
Autoignition:	395 °C	(50 %(m)) (Directive 92/69/EEC, A.15)
Lower explosion limit:	1.5 %(V)	Product not examined: Value is calculated from the data of the components.
Upper explosion limit:	50 %(V)	Product not examined: Value is calculated from the data of the components.
Flammability:	does not ignite	(other)
Self-ignition temperature:		(other) not self-igniting

Suitable extinguishing media:

water spray, dry powder, carbon dioxide, foam

Hazards during fire-fighting:

No particular hazards known.

Protective equipment for fire-fighting:

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

Further information:

Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems.

6. Accidental release measures

Personal precautions:

Wear appropriate respiratory protection. Use personal protective clothing. Ensure adequate ventilation.

Environmental precautions:

Do not discharge into drains/surface waters/groundwater.

Cleanup:

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

7. Handling and Storage

Handling

General advice:

Ensure thorough ventilation of stores and work areas. Avoid aerosol formation.

Protection against fire and explosion:

Avoid all sources of ignition: heat, sparks, open flame.

Storage

General advice:

Keep container tightly closed and dry; store in a cool place. Store protected against freezing.

Storage stability:

Storage temperature: <= 25 °C

Storage duration: 12 Months

From the data on storage duration in this safety data sheet no agreed statement regarding the warrantee of application properties can be deduced.

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8. Exposure Controls and Personal Protection

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. Do not exceed the maximum use concentration for the respirator facepiece/cartridge combination. For emergency or non-routine, high exposure situations, use a NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

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 depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures:

Eye wash fountains and safety showers must be easily accessible. Wear protective clothing as necessary to prevent contact. Employees should shower at the end of the shift. Wash soiled clothing immediately.

9. Physical and Chemical Properties

Form:	liquid	
Odour:	pungent odour	
Colour:	colourless to yellow yellow	
pH value:	3.7 5.9	(50 %(m), 23 °C) (other) (0.5 %(m), 23 °C) (other)
Melting point:	approx. -33 °C	(Directive 92/69/EEC, A.1)
Boiling point:	101.5 °C	(987.1 hPa) (other)
Vapour pressure:	104.68 hPa	(50 °C)
Density:	1.13 g/cm ³	(20 °C) (DIN 51757)
Relative density:	1.1288	(20 °C) (pycnometer)
Partitioning coefficient n-octanol/water (log Pow):	-0.36	(23 °C) (Directive 92/69/EEC, A.8)
Viscosity, dynamic:	20 mPa.s	(50 °C) (DIN 53015)
Viscosity, kinematic:	12.75 mm ² /s	(25 °C)
Solubility in water:		(20.2 °C) miscible
Molar mass:	100.12 g/mol	

10. Stability and Reactivity

Conditions to avoid:

> 50 degrees Celsius

Substances to avoid:

acids, bases

Hazardous reactions:

The product is chemically stable.

Decomposition products:

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Thermal decomposition products: carbon monoxide, carbon dioxide

Corrosion to metals:

Corrosive effect on metals.

Oxidizing properties:

Based on its structural properties the product is not classified as oxidizing. (other)

11. Toxicological information

Acute toxicity

Oral:

Type of value: LD50

Species: rat (male/female)

Value: 143 - 158 mg/kg (OECD Guideline 401)

Inhalation:

Type of value: LC50

Species: rat (male/female)

Value: 0.48 mg/l (OECD Guideline 403)

Exposure time: 4 h

An aerosol was tested.

Dermal:

Type of value: LD50

Species: rat (male/female)

Value: > 2,000 mg/kg (other)

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

Irritation / corrosion

Information on: Glutaraldehyde

Skin:

Species: rabbit

Result: Corrosive.

Method: Draize test

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

Eye:

Species: rabbit

Result: Risk of serious damage to eyes.

Method: Draize test

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

Sensitization:

Open epicutaneous test (OET)

Species: guinea pig

Result: sensitizing

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

Literature data.

Repeated dose toxicity

Information on: Glutaraldehyde

Other Information:

Toxicological data applies only to the water free substance.

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12. Ecological Information

Fish

Acute:

Fish test acute static

Lepomis macrochirus/LC50 (96 h): 9.4 mg/l

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

Fish test acute static

Cyprinodon variegatus/LC50 (96 h): 39 mg/l

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

Aquatic invertebrates

Acute:

Daphnia test acute static

Daphnia magna/EC50 (48 h): 5.75 mg/l

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

other Flow through.

mussel/EC50 (96 h): 0.75 mg/l

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

OPP 72-3 (EPA-Guideline) Flow through.

Mysid shrimp/LC50 (96 h): 5.5 mg/l

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

Aquatic plants

Toxicity to aquatic plants:

OECD Guideline 201 static

green algae/EC50 (72 h): 0.6 mg/l

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

ISO/DIS 10253 Skeletonema costatum/EC50 (72 h): 0.92 mg/l

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

Microorganisms

Toxicity to microorganisms:

OECD Guideline 209 aerobic

activated sludge, domestic/EC20 (30 min): approx. 15 mg/l

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

Non-Mammals

Other terrestrial non-mammals:

LD50: 0.73 ml/kg (50%aq.)

Moderately toxic.

Degradability / Persistence

Biological / Abiological Degradation

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.

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Environmental mobility:
Transport between environmental compartments:
other adsorption/water - soil
log KOC: 0.76

13. Disposal considerations

Waste disposal of substance:
Incinerate in suitable incineration plant, observing local authority regulations.
Do not discharge substance/product into sewer system. Incinerate or dispose of in a RCRA-licensed facility.

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

RCRA: D002

14. Transport Information

Land transport

USDOT

Hazard class: 8
Packing group: II
ID number: UN 2922
Hazard label: 8, 6.1, EHSM
Proper shipping name: CORROSIVE LIQUID, TOXIC, N.O.S. (contains GLUTARALDEHYDE)

Sea transport

IMDG

Hazard class: 8
Packing group: II
ID number: UN 2922
Hazard label: 8, 6.1, EHSM
Marine pollutant: YES
Proper shipping name: CORROSIVE LIQUID, TOXIC, N.O.S. (contains GLUTARALDEHYDE)

Air transport

IATA/ICAO

Hazard class: 8
Packing group: II
ID number: UN 2922
Hazard label: 8, 6.1
Proper shipping name: CORROSIVE LIQUID, TOXIC, N.O.S. (contains GLUTARALDEHYDE)

15. Regulatory Information

Federal Regulations

Registration status:
Chemical TSCA, US released / listed

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Biocide TSCA, US released / exempt

OSHA hazard category: Acute target organ effects reported; Toxic - oral; Highly toxic - inhalation

EPCRA 311/312 (Hazard categories): Acute;

State regulations

State RTK
MA, NJ, PA

CAS Number
111-30-8

Chemical name
glutaral

16. Other Information

NFPA Hazard codes:

Health : 3 Fire: 1 Reactivity: 0 Special:

HMIS III rating

Health: 3⁺ Flammability: 0 Physical hazard: 0

NFPA and HMIS use 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 extreme danger. Although similar, the two rating systems are intended for different purposes, and use different criteria. The NFPA system was developed to provide an on-the-spot alert to the hazards of a material, and their severity, to emergency responders. The HMIS system was designed to communicate workplace hazard information to employees who handle hazardous chemicals.

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MSDS Prepared by:

BASF NA Product Regulations
msds@basf.com
MSDS Prepared on: 2010/08/02

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