

Image silver stabilizer

Sistan protects films and papers from changes caused by environmental effects.

BERGGER SISTAN

1. Identification

Product identifier : BERGGER Sistan
Application : Photographic paper developer
Supplier : BERGGER SAS, Les plaines de Rejatas, 87260 Vicq-sur-Breuilh
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2. Hazards identification

Classification according to Regulation (EC) No 1272/2008

EUH032 Contact with acids liberates very toxic gas.
Acute Tox.4 H302 Harmful if swallowed.
Acute Tox.4 H312 Harmful in contact with skin.
Acute Tox.4 H332 Harmful if inhaled.
Stot Re. 2 H 373 May cause damage to organs through prolonged or repeated exposure.

Hazard pictograms



Signal word

Danger

Hazard-determining components of labelling

Diethylene Glycol

Hazard statements

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Precautionary statements

P102 Keep out of reach of children.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233 Keep container tightly closed.
P260 Avoid breathing dust/fumes/gas/mist/vapours/spray.
P264 Wash ... thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection. [As modified by IV ATP]
P314: Get medical advice/attention if you feel unwell.
P302 + 352 If on skin: Wash with plenty of water...
P333 + 313 If skin irritation or a rash occurs: Get medical advice/attention.
P362 + 364 Take off contaminated clothing and wash it before reuse.

3. Composition/information on ingredients

Mixtures

Mixture of the substances listed below with harmless additions.

Dangerous components		
CAS: 1762-95-4 EINECS: 217-175-6	Ammonium Thiocyanate EUH032; Acute Tox.4, H302; Acute Tox.4, H312; Acute Tox.4, H332	> 5 <= 10%
CAS: 111-46-6 EINECS: 203-872-2	Diethylene Glycol Aquatic Tox.4, H302; STOT RE 2, H373	> 1 <= 5%

4. First aid measures

General information

Instantly remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 24 hours after the accident.

After inhalation Unlikely route of exposure as the product does not contain volatile substances. Move the exposed person to fresh air at once. Provide rest, warmth and fresh air. Get medical attention if any discomfort continues.

After skin contact Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water. Contact physician if irritation continues.

After eye contact Remove victim immediately from source of exposure. Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Contact physician if irritation persists.

After swallowing NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Remove victim immediately from source of exposure. Rinse mouth thoroughly. Drink a few glasses of water or milk. Provide rest, warmth and fresh air. Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs. Get medical attention.

5. Firefighting measures

Suitable extinguishing agents

CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

For safety reasons unsuitable extinguishing agents Water with a full water jet.

Special hazards arising from the substance or mixture Can be released in case of fire

No data available

Advice for firefighters

Protective equipment

Do not inhale explosion gases or combustion gases.

Wear self-contained breathing apparatus.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear protective clothing.
Avoid causing dust.

Environmental precautions:

Inform respective authorities in case product reaches water or sewage system.
Do not allow to enter drainage system, surface or ground water.

Methods and material for containment and cleaning up:

Dispose of contaminated material as waste according to item 13.

Reference to other sections

See Section 8 for information on personal protection equipment.

7. Handling and storage

Precautions for safe handling

Open and handle container with care.

Information about protection against explosions and fires: No special measures required.

Conditions for safe storage, including any incompatibilities

Requirements to be met by storerooms and containers: No special requirements.

Information about storage in one common storage facility:

Keep away from foodstuffs, beverages and food.

Further information about storage conditions:

Store in closed original container in a dry place. Store under well-ventilated conditions at a temperature below 25°C.

Storage class Chemical storage

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

8. Exposure controls/personal protection

Control parameters

Components with limit values that require monitoring at the workplace: **Diethylene Glycol**

Systemic effects Long term Workers inhalation = 22,11 (mg/m³)

Systemic effects Long term Workers dermal = 1,37 (mg/kg bw/day)

Systemic effects Long term Consumers inhalation = 12 (mg/m³)

Systemic effects Long term Consumers dermal = 21 (mg/kg bw/day)
Systemic effects Short term Workers inhalation = 60 (mg/m³)
Local effects Long term Workers inhalation = 22,11
Local effects Long term Consumers oral = 12 (mg/kg bw/day)
Local effects Long term Consumers inhalation = 12 (mg/m³)
PNEC
Sweet water = 3,17 (mg/l)
sediment Sweet water = 1,2 (mg/kg/sediment)
Sea water = 0,317 (mg/l)
sediment Sea water = 1,2 (mg/kg/sediment)
intermittent emissions = 10 (mg/l)
STP = 31,7 (mg/l)
ground = 0,129 (mg/kg ground)

Additional information:

The lists that were valid during the compilation were used as basis.

Exposure controls

General protective and hygienic measures

The usual precautionary measures should be adhered to general rules for handling chemicals.

Keep away from foodstuffs, beverages and food.

Take off immediately all contaminated clothing.

Wash hands during breaks and at the end of the work.

Avoid contact with the eyes and skin.

Do not eat, drink or smoke while working.

Personal protective equipment

Breathing equipment: Not required.

Protection of hands:

Protective gloves. The protective gloves to be used must comply with the specifications of the EC directive 89/686/EEC and the resultant standard EN 374.

This recommendation applies only to the product stated in the Safety Data Sheet and supplied by us as well as to the purpose specified by us.

Only use chemical-protective gloves with CE-labelling of category III.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Penetration time of glove material

The determined penetration times according to EN 374 part III are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:

9. Physical and chemical properties

Information on basic physical and chemical properties	
<i>Appearance</i>	
Form	Liquid
Colour	Colourless / Clear
Odour	Undefined
<i>pH Value at 25°C</i>	7.00 ± 0.05 a 25 °C
<i>Boiling point / Boiling Range</i>	non oxydizing
<i>Ignition temperature</i>	not flammable
<i>Self-inflammability</i>	not flammable
<i>Danger of explosion</i>	Product is not explosive.
<i>Density at 25 °C</i>	1,020 ± 0.05
<i>Solubility in / Miscibility with</i>	
Water	miscible
<i>Other information</i>	No further relevant information available.

10. Stability and reactivity

Reactivity

Chemical stability

Stable under the prescribed storage conditions. No particular stability concerns.

Possibility of hazardous reactions No hazardous reactions when handled and stored according to provisions.

Conditions to avoid -

Materials to avoid Generate toxic gases in contact with inorganic sulfides, strong reducing agents.

Hazardous decomposition products:

Does not decompose when used for intended uses.

11. Toxicological information

Information on toxicological effects

This chemical formulation has not been tested for health effects. Exposure effects listed are based on existing health data for the individual components which comprise the mixture.

Acute toxicity LD/LC50 values that are relevant for classification:		
Diethylene Glycol		
Oral	LD50	500 mg/kg (rat)
Dermal	LD50	13300 mg/kg (rat or rabbit)
Inhal	LD50	4,6 mg/l/4h
Ammonium Thiocyanate		
Oral	LD50	500 mg/kg (rat)

Subacute to chronic toxicity:

May cause damage to organs through prolonged or repeated exposure

12. Ecological informations

Toxicity

Dangerous for the environment

Diethylene Glycol

Alga Scenedesmus quadricauda value = 2700 mg/l. Daphnia Daphnia magna test value = 84000 mg/l. test: 48 h

Acinetobacter bacteria value = 8000 mg/l. test: 4:0 pm

Fish Gambusia affinis = 32000 Value mg/l. test: 96 h

Persistence and degradability Not determined

Bioaccumulative potential Not determined

Behaviour in environmental systems: Not determined

Mobility in soil No further relevant information available.

Ecotoxic effects: No further relevant information available.

Other adverse effects No further relevant information available.

13. Disposal considerations

Waste treatment methods

Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Must be specially treated under adherence to official regulations.

Uncleaned packagings

Recommendation:

Non contaminated packagings can be used for recycling.

Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.

Recommended cleaning agent: Water, if necessary with cleaning agent.

14. Transport information

Not applicable

15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

Legislative Decree. 02/03/1997 n. 52 (Classification, packaging and labeling of dangerous substances). Legislative Decree 14/03/2003 n. 65 (Classification, packaging and labeling of dangerous substances). Legislative Decree. 02/02/2002 n. 25 (Risks related to chemical agents at work). D.M. 26/02/2004 Work (Exposure Limits Professional); D.M. 03/04/2007 (Implementation of Directive n. 2006/8 / EC). Regulation (EC) No. 1907/2006 (REACH), Regulation (EC) No. 1272/2008 (CLP), Regulation (EC) 790 / 2009.D.Lgs. September 21, 2005 n. 238 (Seveso Ter).

16. Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing data specification sheet:

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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
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

Sources

applicable EEC directives: 1907/2006, 1272/2008
Internal physical tests of Calbe Chemie Laboratory, MSDS of the ingredients,
Information system on hazardous substances of the German Social Accident Insurance (GESTIS-database on hazardous substances), <http://www.dguv.de/ifa/en/gestis/stoffdb/index.jsp>)