

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 27.03.2014

Version number 1

Revision: 27.03.2014

SECTION 1: Identification of the substance/mixture and of the company/ undertaking

- **1.1 Product identifier**
- **Trade name: Silver Immersion Bath**
- **Article number:** 507204, 507230, 507231, 507153
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture**
Surface active agent
Cleaning agent/ Cleaner
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Gebr. Boley GmbH & Co. KG
Julius-Hölder-Str. 2
D – 70597 Stuttgart

Tel: +49-(0) 711 132 71-0
Fax: +49-(0) 711 132 71-90
Competent person acc. to Regulation (EC) No. 1907/2006: Mr Lutz
- **Further information obtainable from:**
Mr Lutz
Tel: +49-(0) 711 132 71-0
Fax: +49-(0) 711 132 71-90
- **1.4 Emergency telephone number:**
Between the usual hours of business:
Monday - Thursday, between 8.00 - 12.00 o'clock
and between 13.00 - 16.00 o'clock
Friday, between 8.00 - 12.00 o'clock
Tel.: +49-(0) 711 132 71-0

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
Carc. 2 H351 Suspected of causing cancer.
Repr. 2 H361d Suspected of damaging the unborn child.
Eye Irrit. 2 H319 Causes serious eye irritation.
Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
Xn; Harmful
R40: Limited evidence of a carcinogenic effect.
Xi; Irritant
R41: Risk of serious damage to eyes.
R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

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- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS07 GHS08

- **Signal word** Warning
- **Hazard-determining components of labelling:**
Thiourea
- **Hazard statements**
H319 Causes serious eye irritation.
H351 Suspected of causing cancer.
H361d Suspected of damaging the unborn child.
H412 Harmful to aquatic life with long lasting effects.
- **Precautionary statements**
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
- **Additional information:**
Contains mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2-isothiazol-3-one [EC no. 220-239-6] (3:1) mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-4-isothiazolin-3-one [EC no. 220-239-6] (3:1). May produce an allergic reaction.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterization: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.
- **Dangerous components:**

CAS: 62-56-6 EINECS: 200-543-5 Index number: 612-082-00-0	Thiourea Xn R22-40-63; N R51/53 Carc. Cat. 3, Repr. Cat. 3 Carc. 2, H351; Repr. 2, H361d; Aquatic Chronic 2, H411; Acute Tox. 4, H302	3<5%
CAS: 7664-38-2 EINECS: 231-633-2 Index number: 015-011-00-6 Reg.nr.: 01-2119485924-24-XXXX	phosphoric acid C R34 Met. Corr.1, H290; Skin Corr. 1B, H314	1<3%

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CAS: 7664-93-9	sulphuric acid	1<3%
EINECS: 231-639-5	C R35	
Index number: 016-020-00-8	Skin Corr. 1A, H314	
Reg.nr.: 1-2119458838-20-0069		
CAS: 95-14-7	benzotriazole	1<3%
EINECS: 202-394-1	Xn R20/22; Xi R36 R52/53	
	Flam. Sol. 1, H228; Acute Tox. 4, H302; Acute Tox. 4, H332; Eye Irrit. 2, H319; Aquatic Chronic 3, H412	

· **Regulation (EC) No 648/2004 on detergents / Labelling for contents**

phosphates, non-ionic surfactants, BENZOTRIAZOLE < 5%

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**

· **General information:** Immediately remove any clothing soiled by the product.

· **After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:**

Rinse with warm water.

If skin irritation continues, consult a doctor.

Generally the product does not irritate the skin.

· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:**

Rinse out mouth and then drink plenty of water.

Call a doctor immediately.

Induce vomiting, if person is conscious. Seek medical help.

· **4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

· **Information for doctor:**

Treat according to symptoms (decontamination, vital functions), no known specific antidote.

· **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:**

Use fire extinguishing methods suitable to surrounding conditions.

The product is not flammable.

· **5.2 Special hazards arising from the substance or mixture**

After evaporation of water (in case of a mass fire for example) the following substances may be formed, if heating goes on:

Carbon dioxide (CO₂)

Incomplete combustion may cause Carbon monoxide, toxic fumes and smouldering gases.

Phosphorus oxides

Sulphur oxides (SO_x)

Nitrogen oxides (NO_x)

· **5.3 Advice for firefighters**

· **Protective equipment:**

Wear self-contained respiratory protective device.

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Wear fully protective suit.

- **Additional information**

Collect contaminated fire fighting water separately. It must not enter the sewage system.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

This material burns after evaporation of water.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Use respiratory protective device against the effects of fumes/dust/aerosol.

- **6.2 Environmental precautions:**

Do not allow product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to penetrate the ground/soil.

In case of seepage into the ground inform responsible authorities.

- **6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

For large amounts: Pump off product.

- **6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**

Store in cool, dry place in tightly closed receptacles.

Open and handle receptacle with care.

Prevent formation of aerosols.

- **Information about fire - and explosion protection:** The product is not flammable.

- **7.2 Conditions for safe storage, including any incompatibilities**

- **Storage:**

- **Requirements to be met by storerooms and receptacles:** Prevent any seepage into the ground.

- **Information about storage in one common storage facility:**

Store away from foodstuffs.

Do not store together with acids.

Do not store together with alkalis (caustic solutions).

Store away from oxidizing agents.

- **Further information about storage conditions:**

The shelf life stated on the label is subject to correct storage of the product.

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

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

- **8.1 Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

7664-38-2 phosphoric acid (1<3%)

WEL Short-term value: 2 mg/m³Long-term value: 1 mg/m³

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- **DNELs**

- **7664-38-2 phosphoric acid**

- Inhalative DNEL 2.92 mg/m³ (worker long-term)

- 0.73 mg/m³ (general population long-term)

- **7664-93-9 sulphuric acid**

- Inhalative DNEL 0.1 mg/m³ (worker short-term)

- 0.05 mg/m³ (worker long-term)

- **PNECs**

- **7664-93-9 sulphuric acid**

- PNEC 8.8 mg/l (sewage treatment plant)

- 0.002 mg/l (sediment marine water)

- 0.002 mg/l (sediment freshwater)

- 0.00025 mg/l (water (marine water))

- 0.0025 mg/l (water (freshwater))

- **Additional information:** The lists valid during the making were used as basis.

- **8.2 Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

- Keep away from foodstuffs, beverages and feed.

- Wash hands before breaks and at the end of work.

- Avoid contact with the eyes and skin.

- Do not eat, drink, smoke or sniff while working.

- Do not inhale gases / fumes / aerosols.

- **Respiratory protection:** Use suitable respiratory protective device only when aerosol or mist is formed.

- **Recommended filter device for short term use:** filter FFP2

- **Protection of hands:**

- Protective gloves

- The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

- **Material of gloves**

- The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- Nitrile rubber, NBR

- Chloroprene rubber, CR

- **Penetration time of glove material**

- The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:** Safety glasses

- **Body protection:**

- Choose personal protective equipment according to activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to DIN-EN 465).

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

- **Form:**

- Fluid

- **Colour:**

- Colourless

- **Odour:**

- Odourless

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- **pH-value at 20 °C:** 2.4
- **Change in condition**
 - Melting point/Melting range:** Undetermined.
 - Boiling point/Boiling range:** 100 °C
- **Flash point:** Not applicable.
- **Flammability (solid, gaseous):** Product is not flammable.
- **Self-igniting:** Product is not selfigniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
 - Oxidizing properties** The product is not flammable.
- **Vapour pressure at 20 °C:** 23 hPa
- **Density at 20 °C:** 1.02 g/cm³
- **Vapour density** Not determined.
- **Evaporation rate** Not determined.
- **Solubility in / Miscibility with water:** Fully miscible.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:** fluid, watery
- **Solvent content:**
 - Organic solvents:** 0.0 %
 - VOC (EC)** 0,00 %
- **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**
No dangerous reactions if handled and stored according to regulations and instructions.
Reacts with oxidizing agents.
Reacts with alkali (lyes).
Reacts with strong acids.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:**
Strong oxidizing agents
Concentrated acids and alkali (lyes)
- **10.6 Hazardous decomposition products:**
None if used correctly.
Concerning decomposition products in the event of fire, see Chapter 5.

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity:

LD/LC50 values relevant for classification:

62-56-6 Thiourea

Oral LD 50 1750 mg/kg (rat)
 Dermal LD 50 > 2800 mg/kg (rabbit)

7664-38-2 phosphoric acid

Oral LD 50 2600 mg/kg (rat)
 NOEC (48h) 56 mg/l (Daphnia magna)

7664-93-9 sulphuric acid

Oral LD 50 2140 mg/kg (rat)

95-14-7 benzotriazole

Oral LD 50 560 mg/kg (rat)
 Dermal LD 50 > 10000 mg/kg (rabbit)
 Inhalative LC 50 (4h) 1.4 mg/l (rat)

Primary irritant effect:

- **on the skin:** No irritant effect.
- **on the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:** No sensitizing effects known.

Subacute to chronic toxicity:

7664-38-2 phosphoric acid

Oral NOAEL 250 mg/kg (rat) (OECD 422)

Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Harmful
 Irritant

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Carc. 2, Repr. 2

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:

62-56-6 Thiourea

EC 10 (18h) 1265 mg/l (Pseudomonas putida)
 EC 50 (24h) 6.8 mg/l (Scenedesmus subspicatus)
 EC 50 (48h) 35 mg/l (Daphnie)
 LC 50 (48h) > 10000 mg/l (Leuciscus idus)
 LC 50 (96h) 10000 mg/l (Brachydanio rerio)

7664-38-2 phosphoric acid

EC 50 (48h) > 100 mg/l (Daphnia magna) (OECD 202)
 EC 50 (72h) > 100 mg/l (Desmodesmus subspicatus) (OECD 201)
 LC 50 (96h) 138 mg/l (Gambusia affinis)
 NOEC (72h) 100 mg/l (Desmodesmus subspicatus) (OECD 201)

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7664-93-9 sulphuric acid

LC 50 (96h) 16 - 28 mg/l (Lepomis macrochirus)

95-14-7 benzotriazole

EC 50 (48h) 91 mg/l (Daphnia magna)

EC 50 (72h) 102 mg/l (Scenedesmus subspicatus)

IC 50 (72h) 231 mg/l (Desmodesmus subspicatus)

LC 50 (96h) > 100 mg/l (Brachydanio rerio)

25 mg/l (Leuciscus idus)

39 mg/l (Salmo gairdneri)

- **12.2 Persistence and degradability** Heavily biodegradable

- **Biodegradability**

62-56-6 Thiourea

Biolog. Abbaubarkeit 0 % (OECD 301 C) ((34 d))

3 % (OECD 301 E) ((28 d))

95-14-7 benzotriazole

Biolog. Abbaubarkeit 90%(28d) % (OECD 302 B)

- **12.3 Bioaccumulative potential** No further relevant information available.

- **12.4 Mobility in soil** No further relevant information available.

- **Ecotoxicological effects:**

- **Remark:** Harmful to fish

- **Additional ecological information:**

- **General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Harmful to aquatic organisms

- **12.5 Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**

- **Recommendation**

Must be specially treated adhering to official regulations.

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **Waste disposal key:**

The mentioned waste codes are recommendations based on the product application as suggested by the manufacturer. Special applications and special disposal conditions at the applier's place may however require another waste code.

- **European waste catalogue**

11 01 11* aqueous rinsing liquids containing dangerous substances

11 01 98* other wastes containing dangerous substances

16 03 05* organic wastes containing dangerous substances

- **Uncleaned packaging:**

- **Recommendation:**

Disposal must be made according to official regulations.

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

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R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R63 Possible risk of harm to the unborn child.

• Contact:

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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 Harmonized 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)

VOC: Volatile Organic Compounds (USA, EU)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Flam. Sol. 1: Flammable solids, Hazard Category 1

Met. Corr. 1: Corrosive to metals, Hazard Category 1

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A

Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Carc. 2: Carcinogenicity, Hazard Category 2

Repr. 2: Reproductive toxicity, Hazard Category 2

Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

• * Data compared to the previous version altered.