

**Material Safety data sheet
according to 1907/2006/EC, Article 31**

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

1.1 Product identifier

- Trade name: High Performance Silver Paste
- Article number: 51-1625-0895

1.2 Relevant identified uses of the substance or mixture and uses advised against
No information available

- Application of the substance / the preparation: High performance paste

• 1.3 Details of the supplier of the safety data sheet Supplier:

Oxford Instruments NanoAnalysis
Halifax Rd, High Wycombe HP12 3SE
United Kingdom
Tel: +44 (0) 1494 442255

- Further information obtainable from: Technical Support

SECTION 2: Hazards Identification

2.1 Classification of the substance or mixture

- Classification according to Regulation (EC) No 1272/2008

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

- 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
- Signal word Warning
- Hazard-determining components of labelling: Silicic acid, sodium salt
- Hazard statements: H315 Causes skin irritation. H319 Causes serious eye irritation.
- Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read carefully and follow all instructions.

P264 Wash thoroughly after handling.

P280 Wear protective gloves / eye protection / face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P332+P313 If skin irritation occurs: Get medical advice/attention.

P362+P364 Take off contaminated clothing and wash it before reuse.

P337+P313 If eye irritation persists: Get medical advice/attention

2.3 Other hazards

- Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable

Trade name: High Performance Silver Paste

SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures

- Description: Mixture of substances listed below with nonhazardous additions.

- Dangerous components: CAS: 7440-22-4 EINECS: 231-131-3 silver

Aquatic Chronic 2, H411

55-75%

CAS: 1344-09-8

EINECS: 215-687-4

Silicic acid, sodium salt

Eye Dam. 1, H318; Acute Tox. 4, H302; Skin Irrit. 2, H315;

STOT SE 3, H335

10-20%

- Additional information: For the wording of the listed hazard 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: No adverse effects are anticipated from inhalation.

- After skin contact: Wash with water and soap and rinse thoroughly.

- After eye contact: Rinse opened eye under running water. If symptoms persist, consult a doctor.

- After swallowing: If symptoms persist consult doctor.

- 4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

- 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.

- 5.2 Special hazards arising from the substance or mixture

No further relevant information available.

- 5.3 Advice for firefighters

- Protective equipment: No special measures required

Trade name: High Performance Silver Paste

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures Not required.
- 6.2 Environmental precautions:
 Dilute with plenty of water.
 Do not allow to enter sewers/ surface or ground water.
- 6.3 Methods and material for containment and cleaning up:
 Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, saw-dust).
- 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 No special precautions are necessary if used correctly.
- Information about fire - and explosion protection: No special measures required.
- 7.2 Conditions for safe storage, including any incompatibilities
- Storage:
 • Requirements to be met by storerooms and receptacles: No special requirements.
 • Information about storage in one common storage facility: Not required.
 • Further information about storage conditions: Keep container tightly sealed.
- 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

- 8.1 Control parameters
 - Additional information about design of technical facilities: No further data; see item 7.
 - Ingredients with limit values that require monitoring at the workplace:
 The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
 - 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. Remove all soiled and contaminated clothing Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.
- Respiratory protection: Not required.
- Protection of hands:
 Protective gloves: The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
 Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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SECTION 8: CONTINUED...

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.

- Penetration time of glove material : The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- Eye protection: Tightly sealed goggles

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- General Information
- Appearance: Form: Pasty, Colour: Silver-coloured
- Odour: Characteristic
- Odour threshold: Not determined.
- pH-value at 20 °C: 11-11.5
- Change in condition: Melting point/freezing point: Undetermined.
- Initial boiling point and boiling range: 100 °C
- Flash point: Not applicable.
- Flammability (solid, gas): Not applicable.
- Decomposition temperature: Not determined.
- Auto-ignition temperature: Product is not selfigniting.
- Explosive properties: Product does not present an explosion hazard.
- Explosion limits: Lower: Not determined. Upper: Not determined.
- Vapour pressure at 20 °C: 23 hPa
- Density at 20 °C: 4.8896-9.94 g/cm³
- Relative density Not determined.
- Vapour density Not determined.
- Evaporation rate Not determined.
- Solubility in / Miscibility with water: Fully miscible.
- Partition coefficient: n-octanol/water: Not determined.
- Viscosity: Dynamic: Not determined. Kinematic: Not determined.
- Solvent content: Water: 20-30 %
- VOC (EC) 0.00 %
- Solids content: 55-75 %
- 9.2 Other information No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity No further relevant information available.

- 10.2 Chemical stability
- Thermal decomposition / conditions to be avoided:
No decomposition if used according to specifications.
- 10.3 Possibility of hazardous reactions No dangerous reactions known.
- 10.4 Conditions to avoid No further relevant information available.
- 10.5 Incompatible materials: No further relevant information available.

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

- Acute toxicity Based on available data, the classification criteria are not met.
- Specific symptoms in biological assay:
- Skin corrosion/irritation
Causes skin irritation. • Serious eye damage/irritation
Causes serious eye irritation. • Respiratory or skin sensitisation
Based on available data, the classification criteria are not met.
- Additional toxicological information:
- CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
- Germ cell mutagenicity Based on available data, the classification criteria are not met.
- Carcinogenicity Based on available data, the classification criteria are not met.
- Reproductive toxicity Based on available data, the classification criteria are not met.
- STOT-single exposure Based on available data, the classification criteria are not met.
- STOT-repeated exposure Based on available data, the classification criteria are not met.
- Aspiration hazard Based on available data, the classification criteria are not met.
- Flammability (solid, gas): Not applicable.
- Decomposition temperature: Not determined.
- Auto-ignition temperature: Product is not selfigniting.
- Explosive properties: Product does not present an explosion hazard.

SECTION 12: : Ecological information

12.1 Toxicity

- Aquatic toxicity: No further relevant information available.
- 12.2 Persistence and degradability No further relevant information available.
- 12.3 Bioaccumulative potential No further relevant information available.
- 12.4 Mobility in soil No further relevant information available.
- Additional ecological information:
- General notes: Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.
- 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 not be disposed together with household garbage. Do not allow product to reach sewage system.
- Recommendation: Disposal must be made according to official regulations.
- Recommended cleansing agents: Water, if necessary together with cleansing agents

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SECTION 14: Transport information

- 14.1 UN-Number
 • ADR, IMDG, IATA Void
- 14.2 UN proper shipping name
 • ADR, IMDG, IATA Void
- 14.3 Transport hazard class(es)
 • ADR, ADN, IMDG, IATA
 • Class Void
- 14.4 Packing group
 • ADR, IMDG, IATA Void
- 14.5 Environmental hazards: Not applicable.
- 14.6 Special precautions for user Not applicable.
- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code Not applicable.
- UN "Model Regulation": Void

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
 • Directive 2012/18/EU
 • Named dangerous substances - ANNEX I None of the ingredients is listed.
- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out

SECTION 16: OTHER

This information is based on our present knowledge and should assist the user with the safe handling of this material when properly applied. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Relevant phrases
 H302 Harmful if swallowed.
 H315 Causes skin irritation.
 H318 Causes serious eye damage.
 H335 May cause respiratory irritation.
 H411 Toxic to aquatic life with long lasting effects.
- Abbreviations and acronyms: ADR: Accord relatif au transport international 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)
 VOC: Volatile Organic Compounds (USA, EU)
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 Acute Tox. 4: Acute toxicity – Category 4
 Skin Irrit. 2: Skin corrosion/irritation – Category 2