

## Safety Data Sheet (1907/2006/EC)

Material: 3921492

**Hyper pure Silicon ingots  
(polished, epitaxial and non polished)**

Version 2.0 (IE)

Print Date 12.07.2024

Date of last alteration: 09.11.2022

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

#### 1.1 Product identifier

**Commercial product name:** Hyper pure Silicon ingots  
(polished, epitaxial and non polished)

CAS No.: 7440-21-3

EC-No.: 231-130-8

REACH registration number: 01-2119480401-47-0220

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of substance / preparation:  
Industrial.  
electronic

#### 1.3 Details of the supplier of the safety data sheet

Manufacturer/distributor: Siltronic AG  
Street/POB-No.: Johannes-Hess-Straße 24  
State/postal code/city: D 84489 Burghausen  
Telephone: +49 8677 906-0

Information about the Safety Data Sheet: Telephone +49 8677 83-4888  
eMail WLCP-MSDS@wacker.com

#### 1.4 Emergency telephone number

Emergency Information (German): Plant fire brigade +49 8677 83-2222  
Emergency Information (internat.): National Response Center +49 621 60-43333

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008:  
Not a hazardous substance or mixture.

#### 2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008:  
No labeling according to GHS required.

EC-No.: 231-130-8

#### 2.3 Other hazards

No data available.

Endocrine disrupting properties - human health: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Endocrine disrupting properties - environment: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### SECTION 3: Composition/information on ingredients

#### 3.1 Substances

##### 3.1.1 Chemical characteristics

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Silicon

### 3.1.2 Hazardous ingredients

This material does not contain any ingredients above the permitted limit(s).

This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57) in amounts above  $\geq 0.1\%$ .

### 3.2 Mixtures

not applicable

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

**General information:**

No special measures required.

**After contact with the eyes:**

Rinse immediately with plenty of water for 10-15 minutes and seek medical advice.

**After contact with the skin:**

No special measures required.

**After inhalation:**

In case of dust formation: Provide fresh air.

**After swallowing:**

No special measures required. In cases of sickness seek medical advice (show label if possible).

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

Any relevant information can be found in other parts of this section.

### 4.3 Indication of any immediate medical attention and special treatment needed

Further toxicology information in section 11 must be observed.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media:**

Use extinguishing measures appropriate to the source of fire.

**Extinguishing media which must not be used for safety reasons:**

not applicable

### 5.2 Special hazards arising from the substance or mixture

Hazardous combustion products: silicon dioxide .

### 5.3 Advice for firefighters

**Special protective equipment for fire fighting:**

Use respiratory protection independent of recirculated air. Use tightly fitting chemical protection suit (see section 8).

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment (see section 8).

### 6.2 Environmental precautions

Observe local/state/federal regulations.

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### 6.3 Methods and material for containment and cleaning up

Take up mechanically and dispose of according to local/state/federal regulations.

### 6.4 Reference to other sections

Relevant information in other sections has to be considered. This applies in particular for information given on personal protective equipment (section 8) and on disposal (section 13).

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

**Precautions for safe handling:**

Keep container closed when not in use. Keep away from incompatible substances in accordance with section 10.

**Precautions against fire and explosion:**

Observe the general rules for fire prevention. Product can separate hydrogen in contact with lyes.

### 7.2 Conditions for safe storage, including any incompatibilities

**Conditions for storage rooms and vessels:**

Observe local/state/federal regulations. Protect against moisture.

**Advice for storage of incompatible materials:**

Keep away from alkalis. Avoid contact with acids.

**Further information for storage:**

Protect against moisture.

### 7.3 Specific end use(s)

No data available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

**Maximum airborne concentrations at the workplace:**

exempt

**Predicted No Effect Concentration (PNEC):**

**silicon**

Area of use:	Value:
Intermittent release	100 mg/l
sewage treatment plant	25 mg/l

### 8.2 Exposure controls

#### 8.2.1 Exposure in the work place limited and controlled

**General protection and hygiene measures:**

Observe standard industrial hygiene practices for the handling of chemical substances. Avoid contact with eyes and skin. Do not eat, drink or smoke when handling. Wash hands at the end of work and before eating.

**Personal protection equipment:**

**Respiratory protection**

No personal respiratory protective equipment normally required.

Respirator must be worn if exposed to dust. Suitable respiratory equipment: Filtering half-face mask, according to acknowledged standards such as EN 149.

Recommended Filter type: FFP1 or equivalent filter, according to acknowledged standards such as EN 149

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### Eye protection

In case of mechanical handling: tight fitting protective goggles .

### Hand protection

Use of protective gloves is recommended when handling the material, according to recognized standards such as EN374. For the choice of suitable gloves, workplace conditions have to be considered, like e.g. handling of other substances and materials.

Recommended glove types: Protective gloves, non-cuttable

### Skin protection

Recommendation in case of dust formation: protective clothing .

### 8.2.2 Exposure to the environment limited and controlled

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Property:	Value:	Method:
Physical state .....	solid	
Form.....	compact	
Colour .....	silver	
Odour .....	odourless	
Odour Threshold .....	no data available	
Melting point.....	1410 °C	
Boiling point/boiling range .....	2355 °C	
Lower explosion limit.....	exempt	
Upper explosion limit.....	exempt	
Flash point.....	exempt	
Ignition temperature .....	Not applicable.	
pH .....	Not applicable. Insoluble in water.	
Viscosity, kinematic.....	not applicable	
Viscosity, dynamic.....	not applicable	
Water solubility.....	practically insoluble	
Vapour pressure.....	not applicable	
Density .....	2,32 g/cm <sup>3</sup>	

### 9.2 Other information

No data available.

Property:	Value:	Method:
Evaporation rate.....	no data available	
Molecular weight .....	no data available	

## SECTION 11: Toxicological information

### 10.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### 10.1.1 Acute toxicity

##### Assessment:

For this endpoint no toxicological test data is available for the whole product.

#### 10.1.2 Skin corrosion/irritation

##### Assessment:

For this endpoint no toxicological test data is available for the whole product.

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### 10.1.3 Serious eye damage/eye irritation

**Assessment:**

For this endpoint no toxicological test data is available for the whole product.

### 10.1.4 Respiratory or skin sensitisation

**Assessment:**

For this endpoint no toxicological test data is available for the whole product.

### 10.1.5 Germ cell mutagenicity

**Assessment:**

For this endpoint no toxicological test data is available for the whole product.

### 10.1.6 Carcinogenicity

**Assessment:**

For this endpoint no toxicological test data is available for the whole product.

### 10.1.7 Reproductive toxicity

**Assessment:**

For this endpoint no toxicological test data is available for the whole product.

### 10.1.8 Specific target organ toxicity - single exposure

**Assessment:**

For this endpoint no toxicological test data is available for the whole product.

### 10.1.9 Specific target organ toxicity - repeated exposure

**Assessment:**

For this endpoint no toxicological test data is available for the whole product.

### 10.1.10 Aspiration hazard

**Assessment:**

Based on the physical-chemical properties of the product no aspiration hazard must be expected.

## 10.2 Information on other hazards

### 10.2.1 Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### 10.2.2 Further toxicological information

By handling the product for many years no damage to health was observed.

## SECTION 12: Ecological information

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### 11.1 Toxicity

**Assessment:**

No expected damaging effects to aquatic organisms. According to current knowledge adverse effects on water purification plants are not expected.

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### 11.2 Persistence and degradability

**Assessment:**

Insoluble in water. Separation by sedimentation.

### 11.3 Bioaccumulative potential

**Assessment:**

No adverse effects expected.

### 11.4 Mobility in soil

**Assessment:**

Insoluble in water.

### 11.5 Results of PBT and vPvB assessment

This product contains no relevant substances considered to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB).

### 11.6 Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### 11.7 Other adverse effects

none known

## SECTION 13: Disposal considerations

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### 12.1 Waste treatment methods

#### 12.1.1 Material

Recommendation:

Observe local/state/federal regulations.

#### 12.1.2 Uncleaned packaging

Recommendation:

Completely discharge containers (no tear drops, no powder rest, scraped carefully). Empty containers should be sent to an approved recycling facility.

#### 12.1.3 Waste Disposal Legislation Ref.No.(EC)

It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

## SECTION 14: Transport information

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### 13.1 – 14.4 UN number; UN proper shipping name; Transport hazard class(es); Packing group

**Road ADR:**

Valuation .....: Not regulated for transport

**Railway RID:**

Valuation .....: Not regulated for transport

**Transport by sea IMDG-Code:**

Valuation .....: Not regulated for transport

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**Air transport ICAO-TI/IATA-DGR:**

Valuation .....: Not regulated for transport

**13.5 Environmental hazards**

Hazardous to the environment: no

**13.6 Special precautions for user**

Relevant information in other sections has to be considered.

**13.7 Transport in bulk according to Annex II of MARPOL and the IBC Code**

Bulk transport in tankers is not intended.

**SECTION 15: Regulatory information**

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

National and local regulations must be observed.

For information on labelling please refer to section 2 of this document.

**Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances (Seveso III):**

Not applicable

**Other specifications, restrictions and prohibitions:**

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals: Not applicable

Regulation (EU) 2019/1148 on the marketing and use of explosives precursors - ANNEX I. RESTRICTED EXPLOSIVES PRECURSORS: Not applicable

Regulation (EU) 2019/1148 on the marketing and use of explosives precursors - ANNEX II. REPORTABLE EXPLOSIVES PRECURSORS: Not applicable

**Details of international registration status**

Relevant information about individual substance inventories, where available, is given below.

- Japan ..... : **ENCS** (Handbook of Existing and New Chemical Substances):  
This product is listed in, or complies with, the substance inventory.
- Australia ..... : **AIIC** (Australian Inventory of Industrial Chemicals):  
This product is listed in, or complies with, the substance inventory.
- China..... : **IECSC** (Inventory of Existing Chemical Substances in China):  
This product is listed in, or complies with, the substance inventory.
- Canada ..... : **DSL** (Domestic Substance List):  
This product is listed in, or complies with, the substance inventory.
- Philippines..... : **PICCS** (Philippine Inventory of Chemicals and Chemical Substances):  
This product is listed in, or complies with, the substance inventory.
- United States of America (USA)..... : **TSCA** (Toxic Substance Control Act Chemical Substance Inventory):  
All components of this product are listed as active or are in compliance with the substance inventory.
- European Economic Area (EEA)..... : **REACH** (Regulation (EC) No 1907/2006):  
General note: the registration obligations for substances imported into the EEA or manufactured within the EEA by the supplier mentioned in section 1 are fulfilled by the said supplier. The registration obligations for substances imported into the EEA by customers or other downstream users must be fulfilled by the latter.
- South Korea (Republic of Korea) ..... : **AREC** (Act on Registration and Evaluation of Chemicals; "K-REACH"):  
Please approach your regular contact for more detailed information.

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### 14.2 Chemical safety assessment

For this product, a chemical safety assessment according to (EC) regulation 1907/2006 (REACH) has been carried out.

## SECTION 16: Other information

### 15.1 Material

The details in this document are based on the state of our knowledge at the time of revision. They do not constitute an assurance of the described product properties in terms of statutory warranty requirements.

The providing of this document to a recipient does not relieve the recipient of his or her responsibility toward compliance with all laws and stipulations applicable to the product. This applies in particular to the further sale or distribution of the product or substances or items containing the product, in other jurisdictions and with regard to the protection of third-party intellectual property rights. If the described product is processed or mixed with other substances or materials, the details stated in this document cannot be conferred to the resultant new product unless this has been expressly mentioned. If the product is repackaged, the recipient is obligated to additionally provide the required safety-related information.

### 15.2 Further information:

Commas appearing in numerical data denote a decimal point. Vertical lines in the left-hand margin indicate changes compared with the previous version. This version supersedes all previous versions.

#### Key or legend to abbreviations and acronyms used in the safety data sheet

ABEK - Multi-Range Filter A, B, E, K; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; APF - Assigned Protection Factor; CAS No. - Chemical Abstracts Service Registry Number; DFG - German Research Foundation; DIN - German institute for standardization; DOC - Dissolved Organic Carbon; d/w - days per week; EC / CE / EG - European Community; EC50 / CE50 - Median effective concentration; ECHA - European Chemicals Agency; ED - endocrine disruptor; EG-RL - test method according to Regulation 440/2008; EN - European Standard; ERC - Environmental Release Category; g/cm<sup>3</sup> - gram per cubic centimeter; h - hour(s); H-Code - hazard statement code(s); hPa - Hectopascal; IATA Regs - International Air Transport Association (IATA) Dangerous Goods Regulations; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 / CI50 - half maximal inhibitory concentration; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IMDG Code - International Maritime Dangerous Goods Code; ISO - International Organization for Standardization; LC50 / CL50 - medium lethal concentration; LD50 / DL50 - medium lethal dose; LOAEC - Lowest Observed Adverse Effect Concentration; LOAEL - Lowest Observed Adverse Effect Level; MARPOL - International Convention for the Prevention of Marine Pollution from Ships; mg/g - milligrams per gram; mg/kg - milligrams per kilogram; mg/l - milligrams per liter; mg/m<sup>3</sup> - milligrams per cubic meter; min - minutes; mJ - millijoule; mm - millimeter; mm<sup>2</sup>/s - square millimeter per second; mPa.s - Millipascal second(s); MSDS / SDB / SDS - safety data sheet; No Observed Adverse Effect Concentration; NOAEL - No Observed adverse effect level; NOEC - No Observed Effect Concentration; NOEL - No Observed Effect Level; OECD - Organization for Economic Cooperation and Development; PBT - persistent, bioaccumulative, toxic; PC - product category; P-Code - precautionary statement code(s); ppm - parts per million; PROC - process category; RCP - reciprocal calculation-based procedure; RID - convention concerning international carriage by rail; SU - sector of use; SVHC - substance of very high concern; Vol% - volume percent; UN No. - United Nations Dangerous Goods Number; vPvB - very Persistent, very Bioaccumulative

- End of Safety Data Sheet -