



**Safety Data Sheet
according to WHS Regulations**

Printing date 01.02.2021

Version number 4

Revision: 01.02.2021

Hazardous according to criteria of Australian Safety and Compensation Council.

1 Identification

· **Product identifier**

· **Trade name:** Heraenium Sun solder 1

· **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.

· **Application of the substance / the mixture** Manufacture of dental prothesis

· **Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

Kulzer Australia Pty Ltd
Unit 20, 53 Lorraine Street
Peakhurst, NSW 2210
Australia

Tel: +61 (0) 2 9153 0311

· **Informing department:** see above

· **Emergency telephone number:**

Poison Information Number: Australia 13 11 26 & New Zealand 0800 764 766

2 Hazard(s) Identification

· **Classification of the substance or mixture**

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin Sens. 1 H317 May cause an allergic skin reaction.

· **Label elements**

· **GHS label elements**

The product is classified and labelled according to the Globally Harmonised System (GHS).

· **Hazard pictograms**



GHS08

· **Signal word** Danger

· **Hazard-determining components of labelling:**

cobalt

· **Hazard statements**

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

· **Precautionary statements**

Avoid breathing dust/fume/gas/mist/vapours/spray.

Wear protective gloves/protective clothing/eye protection/face protection.

In case of inadequate ventilation wear respiratory protection.

Specific treatment (see on this label).

If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

Wash contaminated clothing before reuse.

· **Other hazards -**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

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3 Composition and Information on Ingredients

· **Chemical characterisation: Mixtures**

· **Description: -**

· **Dangerous components:**

| | | |
|-------------------------------------|---|--------|
| CAS: 7440-48-4 EINECS: 231-158-0 | cobalt Resp. Sens. 1, H334; Skin Sens. 1, H317 | 25-50% |
| CAS: 7440-47-3 EINECS: 231-157-5 | chromium | 10-25% |
| CAS: 7440-21-3 EINECS: 231-130-8 | silicon, containing more than 99.99 per cent by weight of silicon Flam. Sol. 2, H228 | 5-10% |
| CAS: 7439-98-7 EINECS: 231-107-2 | molybdenum Ox. Sol. 1, H271 | 0-5% |
| CAS: 7440-42-8 EINECS: 231-151-2 | boron Acute Tox. 4, H302 | < 1% |

· **Additional information**

The informations as to risks and precautions given in the chapters 4 to 8, 10 to 12 do not apply to the product itself, but only to dust and vapours generated on working with it.
For the wording of the listed hazard phrases refer to section 16.

4 First Aid Measures

· **Description of first aid measures**

- **General information** No special measures required.
- **After inhalation** After inhalation of smoke, vapors and dust get fresh air and see a doctor.
- **After skin contact** Instantly wash with water and soap and rinse thoroughly.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing**
Rinse out mouth and then drink plenty of water.
In case of persistent symptoms consult doctor.
- **Information for doctor**
 - **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
 - **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire Fighting Measures

- **Extinguishing media**
 - **Suitable extinguishing agents**
CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
 - **Protective equipment:** Do not inhale explosion gases or combustion gases.
- **Additional information -**

6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures**
Use breathing protection against the effects of fumes/dust/aerosol.
- **Environmental precautions:** Do not allow to enter drainage system, surface or ground water.
- **Methods and material for containment and cleaning up:** Collect mechanically.

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- **Reference to other sections**
- See Section 13 for information on disposal.
- See Section 8 for information on personal protection equipment.
-

7 Handling and Storage

- **Handling**
 - **Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
 - **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
 - **Storage**
 - **Requirements to be met by storerooms and containers:** No special requirements.
 - **Information about storage in one common storage facility:** Not required.
 - **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls and personal protection

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

· **Components with critical values that require monitoring at the workplace:**

7440-48-4 cobalt (25-50%)

| | |
|-----------------|--|
| NES (Australia) | 0.05 mg/m ³ Sen |
| PEL (USA) | 0.1* mg/m ³ *for metal dust & fume, as Co |
| REL (USA) | 0.05* mg/m ³ *For metal dust & fume, as Co |
| TLV (USA) | 0.02 mg/m ³ as Co; BEI |

7440-47-3 chromium (10-25%)

| | |
|-----------------|-----------------------|
| NES (Australia) | 0.5 mg/m ³ |
| PEL (USA) | 1 mg/m ³ |
| REL (USA) | 0.5 mg/m ³ |
| TLV (USA) | 0.5 mg/m ³ |

7440-21-3 silicon, containing more than 99.99 per cent by weight of silicon (5-10%)

| | |
|-----------------|---|
| NES (Australia) | 10 mg/m ³ |
| PEL (USA) | 15*; 5** mg/m ³ *Total dust **Respirable fraction |
| REL (USA) | 10*; 5** mg/m ³ *Total dust **Respirable fraction |
| TLV (USA) | 10 mg/m ³ |

7439-98-7 molybdenum (0-5%)

| | |
|-----------------|--|
| NES (Australia) | 10 mg/m ³ |
| TLV (USA) | 10 l* mg/m ³ as Mo; 3 R* 0.5 R** |

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· **Additional information:** The lists that were valid during the compilation were used as basis.

· **Exposure controls**

· **Personal protective equipment**

· **General protective and hygienic measures**

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

· **Breathing equipment:** Not required.

· **Protection of hands:**

Check protective gloves prior to each use for their proper condition.
recommended

· **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.

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

Butyl rubber, BR

Nitrile rubber, NBR

· **Eye protection:** not absolutely necessary

· **Body protection:** Light weight protective clothing

9 Physical and Chemical Properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· **Form:**

Rope

· **Colour:**

Various colours

· **Smell:**

Odourless

· **Odour threshold:**

Not determined.

· **pH-value:**

Not applicable.

· **Change in condition**

· **Melting point/freezing point:**

ca. 1180 °C

· **Initial boiling point and boiling range:** Not determined

· **Flash point:**

Not applicable

· **Inflammability (solid, gaseous)**

Not determined.

· **Ignition temperature:**

· **Decomposition temperature:**

Not determined.

· **Self-inflammability:**

Product is not selfigniting.

· **Explosive properties:**

Product is not explosive.

· **Critical values for explosion:**

· **Lower:**

Not determined.

· **Upper:**

Not determined.

· **Steam pressure:**

Not applicable.

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| | |
|--|--|
| · Density at 20 °C | 7 g/cm ³ |
| · Relative density | Not determined. |
| · Vapour density | Not applicable. |
| · Evaporation rate | Not applicable. |
| · Solubility in / Miscibility with | |
| · Water: | Insoluble |
| · Partition coefficient: n-octanol/water: | Not determined. |
| · Viscosity: | |
| · dynamic: | Not applicable. |
| · kinematic: | Not applicable. |
| · Solvent content: | |
| · Solids content: | 100,0 % |
| · Other information | No further relevant information available. |

10 Stability and Reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
 - **Conditions to be avoided:** No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** None

11 Toxicological Information

- **Information on toxicological effects**
 - **Acute toxicity**

· **LD/LC50 values that are relevant for classification:**

7440-42-8 boron

| | | |
|------|------|-----------------|
| Oral | LD50 | 650 mg/kg (rat) |
|------|------|-----------------|

- **Primary irritant effect:**
 - **Skin corrosion/irritation** No irritant effect.
 - **Serious eye damage/irritation** No irritant effect.
 - **Respiratory or skin sensitisation** No sensitizing effect known.
- **Additional toxicological information:**

The product is not subject to classification according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version.
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

12 Ecological Information

- **Toxicity**
 - **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
 - **Bioaccumulative potential** No further relevant information available.

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- **Mobility in soil** No further relevant information available.
- **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

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13 Disposal considerations

- **Waste treatment methods**
 - **Recommendation** Smaller quantities can be disposed with household garbage.
- **Uncleaned packagings:**
 - **Recommendation:** Packaging can be reused or recycled after cleaning.

14 Transport information

| | |
|--|-----------------|
| · UN-Number · ADG, ADN, IMDG, IATA | Void |
| · UN proper shipping name · ADG, ADN, IMDG, IATA | Void |
| · Transport hazard class(es) · ADG, ADN, IMDG, IATA · Class | Void |
| · Packing group · ADG, IMDG, IATA | Void |
| · Environmental hazards: · Marine pollutant: | No |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of Marpol and the IBC Code | Not applicable. |
| · Transport/Additional information: | - |
| · UN "Model Regulation": | Void |

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **GHS label elements**

The product is classified and labelled according to the Globally Harmonised System (GHS).
- **Hazard pictograms**



GHS08

- **Signal word** Danger

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· **Hazard-determining components of labelling:**

cobalt

· **Hazard statements**

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

· **Precautionary statements**

Avoid breathing dust/fume/gas/mist/vapours/spray.

Wear protective gloves/protective clothing/eye protection/face protection.

In case of inadequate ventilation wear respiratory protection.

Specific treatment (see on this label).

If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

Wash contaminated clothing before reuse.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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.

· **Relevant phrases**

H228 Flammable solid.

H271 May cause fire or explosion; strong oxidiser.

H302 Harmful if swallowed.

H317 May cause an allergic skin reaction.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

· **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

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

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Sol. 2: Flammable solids – Category 2

Ox. Sol. 1: Oxidizing solids – Category 1

Acute Tox. 4: Acute toxicity – Category 4

Resp. Sens. 1: Respiratory sensitisation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1

· * **Data compared to the previous version altered.**