

Keralloy FG

1. Identification of the substance / Preparation and Company:

Identification of the substance or preparation:

Commercial product name: Keralloy FG

Company / Manufacturer: SILADENT Dr. Böhme & Schöps GmbH
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2. Hazards Identification:

- 2.1 Classification of the substance or mixture according to Regulation (EC) No 1272/2008, 67/548/EEC, 1999/45/EC: Non-hazardous mixture.
- 2.2 Labelling elements: According to the guidelines of the EU CLP Regulation (1272/2008) the product does not have to be labelled.
- 2.3 Other hazards:
- Eye contact: May cause severe irritations or chemical burns.
 - Skin contact: May cause severe irritations or burns.
 - After swallowing: May cause gastrointestinal irritation, nausea, vomiting and diarrhoea.
 - After inhalation: May cause irritations or burns of the respiratory system.
 - Chrome: There is some indication that chrome can cause nose and or lung cancer. Furthermore, chrome metal has caused tumours by laboratory animals through implant- and intravenous ways. The inhalation of dust can cause anxiety and pain in the breast area, coughing and difficult breathing, as well as headache, nausea, dyspnoea or blurred vision. Dust can irritate skin o eyes. Swallowing can cause damage to the central nervous system.
 - Manganese: In case of long-term inhalation of manganese in the form of its inorganic compounds, manganism can be caused. Target organs: respiratory system, central nervous system, blood, kidneys. General deterioration of the medical results after contact with manganese: chronic respiratory diseases, liver or kidney damages, psychiatric disorders, alcoholism and damages of the nervous system.
 - Molybdenum: By animal experiments chronic inhalation of molybdenum compounds caused appetite and weight loss, diarrhoea, muscle malfunctions, hair loss and gout. Overconsumption of molybdenum can affect the copper metabolism.

3. Composition / Information on Ingredients:

Chemical characterisation: Mixture

Metal	in %	symbol	CAS-no.	EC-No.
Cobalt	63,4	Co	7440-48-4	231-165-9
Silicium	<1	Si	7440-21-0	231-130-8
Molybdenum	6.10	Mo	7439-98-7	231-107-2
Chrome	28,85	Cr	7440-47-3	7440-47-3 231-157-5
Manganese	<1	Mn	7439-96-5	231-105-1

Composition in % weight (nominal)

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4. First aid measures:

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| 4.1 | After inhalation: | Supply fresh air. In case of irritation of the respiratory system seek medical help / attention. |
| | After eye contact: | Rinse out immediately with plenty of water for at least 15 minutes occasionally lifting the upper and lower eyelids. |
| | After skin contact: | Wash off thoroughly with soap and plenty of water. |
| | After swallowing: | Drink 2-4 cups of water. Induce person to vomit. |
| 4.2 | Most important symptoms and effects, both acute and delayed: | None known. |
| 4.3 | Indication of any immediate medical attention and special treatment needed: | None known. |

5. Fire Fighting measures:

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| 5.1 | Suitable extinguishing agents: | Metal fire powder, sand. |
| 5.2 | Special hazards arising from the substance or mixture: | This substance is fire and explosion proof. If heated over the flash point the formation of vapours are possible; which are not flammable. |
| 5.3 | Special protective measures and equipment for fire-fighters: | Wear protective clothing and use respiratory device. |

6. Accidental release measures:

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| 6.1 | Personal safety precautions: | Advice for non-emergency personnel:
Wear personal protective equipment; see section 8.
Advice for action forces:
Wear personal protective equipment; see section 8. |
| 6.2 | Environmental precautions: | Collect contaminated material in separate containers. Dispose of according to national regulations. |
| 6.3 | Methods for cleaning up: | Avoid dust formation and pick-up mechanically. |
| 6.4 | Reference to other sections: | Safety precautions see section 8. |

7. Handling and Storage:

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| 7.1 | Information for safe handling: | Ensure that the workplace a well ventilated. Avoid inhalation of vapours during melting and dust during grinding. Before eating or smoking wash off hands to avoid any admission of the substance into the body. |
| 7.2 | Conditions for safe storage, including any incompatibilities
Requirements for storage facilities and containers: | Keep container tightly sealed. |
| 7.3 | Specific uses: | No special references. |

8. Exposure controls / Personal protection:

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| 8.1 | Control Parameters:
Occupational exposure limits: | |
| 8.2 | Exposure controls/personal protection:
Respiratory protection: | Ensure good ventilation and local exhaustion, to keep the values under the TLV-amounts according to section 2. In case the amount of dust is over the TLV-amounts wear a NIOSH-approved respiratory protective device. |
| | Hand protection: | Recommendation for grinding: latex gloves
Recommendation for casting and handling of liquid metals or forms: heat-resistant gloves |
| | Eye protection: | During grinding wear goggles with side covers and a face shield. |
| | Further precautions: | Wear an apron, lab coat or other protective clothing. |

Keralloy FG**9. Physical and chemical properties:**

9.1	Appearance:	
	Colour:	white
	Odour:	Not applicable.
	pH-value:	Not applicable.
	Boiling point / boiling range:	Not applicable.
	Melting point / Melting range:	1370 - 1430°C
	Working temperature:	1200°C
	Flash point:	Not applicable.
	Flammability:	Not applicable.
	Self-ignition:	Not applicable.
	Danger of explosion:	Not applicable.
	Oxidising properties:	Not applicable.
	Vapour pressure:	Not applicable.
	Relative density at 20°C:	8,4 g/cm ³
	Solubility in water:	Insoluble.
9.2	Other information:	None.

10. Stability and Reactivity:

10.1	Reactivity:	By normal or higher temperatures (under the melting point) the material oxidises, but stays stable. By very high temperatures, the alloy develops vapours.
10.2	Chemical stability:	Under normal environmental conditions, the product is chemically stable.
10.3	Possibility of hazardous reactions:	In case the product is exposed to acid hydrogen gas can develop.
10.4	Conditions to avoid:	Not applicable, if product is handled according to the instruction for use.
10.5	Materials to avoid:	Acids.
10.6	Hazardous decomposition products:	Not known.

11. Toxicological Information:

11.1	Information on toxicological effects:	No special requirements, see section 2 & 3
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12. Ecological Information:

12.1	Toxicity	No data available.
12.2	Persistence and degradability:	No data available.
12.3	Bioaccumulation potential:	No data available.
12.4	Mobility:	No data available.
12.5	Results of PBT and vPvB assessment:	No data available.
12.6	Other harmful effects:	No data available.

13. Disposal Considerations:

13.1	Waste treatment methods:	
	Product:	Dust should be should be recovered as it has an economic value.
	Packaging:	Dispose of according the local regulations.

14. Transport Information:

14.1	UN-number:	Not applicable.
14.2	Proper UN shipping name:	Not applicable.
14.3	Transport hazard class:	Not applicable.
14.4	Packing group:	Not applicable.
14.5	Environmental hazards:	No data available.
14.6	Special precautions for user:	None.
14.7	Transportation in bulk according to Annex II of MARPOL73/78 and IBC Code:	Not applicable.

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15. Regulatory Information:

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
National regulations: Water hazard class: 1, accord. VwVwS (self-assessment)
- 15.2 Chemical safety assessment: A chemical safety assessment has not been carried out.

16. Further Information:

This information is based on our present knowledge, apply to the product as delivered and serve to describe the safety precautions of the product. However this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.