

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**Trade name **Chromium (III) sulfide**

Stock number: 12845

CAS Number: 12018-22-3

EC number: 234-638-8

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

Identified use: SU24 Scientific research and development

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

Manufacturer/Supplier: Alfa Aesar GmbH & Co.KG  
A Johnson Matthey Company  
Zeppelinstr. 7b  
76185 Karlsruhe / Germany  
Tel: +49 (0) 721 84007 280  
Fax: +49 (0) 721 84007 300  
Email: tech@alfa.com  
www.alfa.com

Informing department:

**1.4 Emergency telephone number:**

Product safety Tel + +049 (0) 7275 988687-0  
Carechem 24: +44 (0) 1235 239 670 (Multi-language emergency number)  
Poison Information Center Mainz  
www.giftinfo.uni-mainz.de Telephone: +49(0)6131/19240

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture**

Classification according to Regulation (EC) No 1272/2008



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H332 Harmful if inhaled.

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

**Classification according to Directive 67/548/EEC or Directive 1999/45/EC** Xn; Harmful

R20/22: Harmful by inhalation and if swallowed.

 Xi; Sensitising

R43: May cause sensitisation by skin contact.

**Information concerning particular hazards for human and environment:**

Not applicable

**Other hazards that do not result in classification**

No information known.

**2.2 Label elements****Labelling according to Regulation (EC) No 1272/2008****Hazard pictograms****Signal word****Hazard statements**

The substance is classified and labelled according to the CLP regulation.

GHS07

Warning

H302 Harmful if swallowed.

H332 Harmful if inhaled.

H317 May cause an allergic skin reaction.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P321 Specific treatment (see on this label).

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Precautionary statements****2.3 Other hazards****Results of PBT and vPvB assessment**

PBT: Not applicable.

vPvB: Not applicable.

**SECTION 3: Composition/information on ingredients****3.1 Substances**

CAS# Designation: 12018-22-3 Chromium (III) sulfide

Identification number(s):

234-638-8

EC number:

**SECTION 4: First aid measures****4.1 Description of first aid measures****After inhalation**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

**After skin contact**

Seek immediate medical advice.

Instantly wash with water and soap and rinse thoroughly.

**After eye contact**

Seek immediate medical advice.

**After swallowing**

Rinse opened eye for several minutes under running water. Then consult doctor.

Seek medical treatment.

**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**CO<sub>2</sub>, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.**5.2 Special hazards arising from the substance or mixture**

If this product is involved in a fire, the following can be released:

Toxic metal oxide smoke

Hydrogen sulphide

**5.3 Advice for firefighters****Protective equipment:**

Wear self-contained breathing apparatus.

Wear full protective suit.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

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<b>6.2 Environmental precautions:</b>	Do not allow material to be released to the environment without proper governmental permits. Do not allow product to reach sewage system or water bodies. Do not allow to enter the ground/soil.	(Contd. of page 1)
<b>6.3 Methods and material for containment and cleaning up:</b>	Dispose of contaminated material as waste according to item 13. Ensure adequate ventilation.	
<b>Prevention of secondary hazards:</b>	No special measures required.	
<b>6.4 Reference to other sections</b>	See Section 7 for information on safe handling See section 8 for information on personal protection equipment. See Section 13 for information on disposal.	

**SECTION 7: Handling and storage**

<b>7.1 Precautions for safe handling</b>	Keep containers tightly sealed. Store in cool, dry place in tightly closed containers. Ensure good ventilation/exhaustion at the workplace.
<b>Information about protection against explosions and fires:</b>	No information known.
<b>7.2 Conditions for safe storage, including any incompatibilities</b>	
<b>Storage</b>	
<b>Requirements to be met by storerooms and containers:</b>	No special requirements.
<b>Information about storage in one common storage facility:</b>	No information known.
<b>Further information about storage conditions:</b>	Keep container tightly sealed. Store in cool, dry conditions in well sealed containers.
<b>7.3 Specific end use(s)</b>	No further relevant information available.

**SECTION 8: Exposure controls/personal protection**

<b>Additional information about design of technical systems:</b>	Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.
<b>8.1 Control parameters</b>	
<b>Components with critical values that require monitoring at the workplace:</b>	Chromium (III) compounds, as Cr mg/m <sup>3</sup>
	ACGIH TLV 0.5; A4
	Belgium TWA 0.5
	Denmark TWA 0.5
	Finland TWA 0.01
	France VME 0.5
	Japan OEL 0.5
	Korea TLV 0.5
	Netherlands MAC-TGG 0.5
	Norway TWA 0.5
	Poland TWA 0.5
	Sweden NGV 0.5
	United Kingdom TWA 0.5
	USA PEL 0.5
<b>Additional information:</b>	No data
<b>8.2 Exposure controls</b>	
<b>Personal protective equipment</b>	
<b>General protective and hygienic measures</b>	The usual precautionary measures should be adhered to in handling the chemicals. Keep away from foodstuffs, beverages and food. Instantly remove any soiled and impregnated garments. Wash hands during breaks and at the end of the work. Maintain an ergonomically appropriate working environment. Use breathing protection with high concentrations.
<b>Breathing equipment:</b>	Check protective gloves prior to each use for their proper condition.
<b>Protection of hands:</b>	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.
<b>Material of gloves</b>	Impervious gloves
<b>Penetration time of glove material</b>	Not determined
<b>Eye protection:</b>	Safety glasses Face protection
<b>Body protection:</b>	Protective work clothing.

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties**

<b>General Information</b>	
<b>Appearance:</b>	
Form:	Powder
Colour:	Brown
Smell:	Odourless
<b>Odour threshold:</b>	Not determined.
<b>pH-value:</b>	Not applicable.
<b>Change in condition</b>	
Melting point/Melting range:	1350 °C
Boiling point/Boiling range:	Not determined
Sublimation temperature / start:	Not determined
<b>Flash point:</b>	Not applicable
<b>Inflammability (solid, gaseous)</b>	Not determined.
<b>Ignition temperature:</b>	Not determined
<b>Decomposition temperature:</b>	Not determined
<b>Self-inflammability:</b>	Not determined.
<b>Danger of explosion:</b>	Product is not explosive.
<b>Critical values for explosion:</b>	
Lower:	Not determined
Upper:	Not determined
<b>Steam pressure:</b>	Not applicable.
<b>Density at 20 °C</b>	3,77 g/cm <sup>3</sup>

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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.
9.2 Other information	No further relevant information available.

**SECTION 10: Stability and reactivity**

10.1 Reactivity	No information known.
10.2 Chemical stability	Stable under recommended storage conditions.
Thermal decomposition / conditions to be avoided:	No decomposition if used and stored according to specifications.
10.3 Possibility of hazardous reactions	No dangerous reactions known
10.5 Incompatible materials:	No information known.
10.6 Hazardous decomposition products:	Toxic metal oxide smoke Hydrogen sulphide Sulphur oxides (SOx)

**SECTION 11: Toxicological information**

11.1 Information on toxicological effects	
Acute toxicity:	Harmful if inhaled. Harmful if swallowed.
LD/LC50 values that are relevant for classification:	No data
Skin irritation or corrosion:	Irritant for skin and mucous membranes.
Eye irritation or corrosion:	Irritant effect.
Sensitization:	May cause an allergic skin reaction.
Germ cell mutagenicity:	No effects known.
Carcinogenicity:	EPA-D: Not classifiable as to human carcinogenicity: inadequate human and animal evidence of carcinogenicity or no data are available. IARC-3: Not classifiable as to carcinogenicity to humans. ACGIH A4: Not classifiable as a human carcinogen: Inadequate data on which to classify the agent in terms of its carcinogenicity in humans and/or animals.
Reproductive toxicity:	No effects known.
Specific target organ system toxicity - repeated exposure:	No effects known.
Specific target organ system toxicity - single exposure:	No effects known.
Aspiration hazard:	No effects known.
Additional toxicological information:	To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

**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:	Do not allow material to be released to the environment without proper governmental permits. Water hazard class 1 (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system. Avoid transfer into the environment.
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	Hand over to disposers of hazardous waste. Must be specially treated under adherence to official regulations. Consult state, local or national regulations for proper disposal.
Uncleaned packagings:	
Recommendation:	Disposal must be made according to official regulations.

**SECTION 14: Transport information**

UN-Number	
ADR, IMDG, IATA	None
14.2 UN proper shipping name	
ADR, IMDG, IATA	None
14.3 Transport hazard class(es)	
ADR, IMDG, IATA	
Class	None
Packing group	
ADR, IMDG, IATA	None
14.5 Environmental hazards:	Not applicable.
14.6 Special precautions for user	Not applicable.
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	Not dangerous according to the above specifications.

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**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

Australian Inventory of Chemical

Substances

Substance is not listed.

Standard for the Uniform Scheduling of

Drugs and Poisons

Substance is not listed.

National regulations

Information about limitation of use:

Employment restrictions concerning young persons must be observed.  
For use only by technically qualified individuals.

Water hazard class:

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

Other regulations, limitations and prohibitive

**regulations**

ELINCS (European List of Notified Chemical

Substances)

Substance is not listed.

Substances of very high concern (SVHC)

according to REACH, Article 57

Substance is not listed.

REACH - Pre-registered substances

Substance is listed.

15.2 Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

**SECTION 16: Other information**

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

**Department issuing data specification sheet:** Health, Safety and Environmental Department.

**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

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

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