Safety Data Sheet

Chromium powder

Revision Date: 8/14/2019
Date Issued: 8/14/2019

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY / UNDERTAKING

Product name	Chromium powder
Product code	NM-0006
CAS	7440-47-3
REACH No. :	A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.
Identified uses	Laboratory chemicals, Manufacture of substances
Supplier	IoLiTec Ionic Liquids Technologies GmbH Salzstrasse 184 D – 74076 Heilbronn Germany
Telephone	+49 (0)7131-89839-0
Fax	+49 (0)7131-89839-109
Emergency telephone	+49 (0)176-84850874
Email	msds@iolitec.de

2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULTATION (EC) No 1272/2008)

Flammable solids, Category 1, H228

Carcinogenicity, Category 2, H351

Classification (67/548/EEC or 1999/45/EC)

Flammable solid

Safety Data Sheet

Chromium powder

Revision Date: 8/14/2019
Date Issued: 8/14/2019

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008, GHS)

Pictogram

Signal word — Danger

Hazard statement(s)

H228	Flammable solid.
H351	Suspected of causing cancer.

Precautionary statement(s)

P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat/sparks/open flames/hot surfaces . - No smoking.
P240	Ground/ bond container and receiving equipment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P370 + P378	In case of fire: Use sand or fire extinguisher class D for extinction.
P405	Store locked up.
P422	Store contents under inertgas (Argon or Nitrogen).

Caution - substance not yet tested completely.

Supplemental Hazard Statements — none

Labelling (67/548/EEC or 1999/45/EC)

Hazard symbol(s)

R-phrase(s)

R11	Highly flammable.
R40	Limited evidence of a carcinogenic effect.

Safety phrases

S7	Keep container tightly closed.
S33	Take precautionary measures against static discharges.
S36/37	Wear suitable protective clothing and gloves.

3 COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient name	Contents	Health(Class)	Risk(R/No.)
Chromium (coated with 1-2% oleic acid)	99.5%	Substance not yet fully tested!	

4 FIRST AID MEASURES

General	Contaminated clothing should be removed and washed before being reused.
Inhalation	Move the exposed person to fresh air at once. If respiratory problems, artificial respiration/oxygen.
Ingestion	Immediately rinse mouth and provide fresh air. Get medical attention immediately.
Skin	Wash the skin immediately with water.
Eyes	Promptly wash eyes with plenty of water while lifting the eye lids. Get medical attention immediately. Continue to rinse for at least 15 minutes.

5 FIRE FIGHTING MEASURES

Extinguishing media	Use: extinguishing powder for metal fires. Do not use water.
Special risks	Flammable powder. Emission of toxic fumes under fire conditions possible.
Protective measures in fire	Wear self-contained breathing apparatus and protective clothing.

6 ACCIDENTAL RELEASE MEASURES

Personal precautions during spill	Evacuate area. Shut off all heat or ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Wear self-contained breathing apparatus, rubber boots and gloves.
Spill cleanup methods	Avoid contact with skin or inhalation of spillage, dust or vapor, Avoid dust formation. Collect and reclaim or dispose in sealed containers in license waste.

7 HANDLING AND STORAGE

Usage precautions	Avoid contact with eyes, skin and clothing. Keep away from heat, sparks and open flame. Protect against electrostatic charges. Do not use in confined spaces without adequate ventilation and/or respirator.
Storage precautions	Store in a closed container in a cool, dry, well ventilated area.

Special storage criteria	Store in a cool location. Store away from oxidizing materials. Store under inert gas

8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

Personal protective equipment

Eye/face protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body Protection

Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Exposure limits

Cr	mg/m3
ACGIH TLV	0.5; not classified as a human carcinogen
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	1

TECHNICAL INSTRUCTIONS ON AIR QUALITY CONTROL (TA LUFT)

Chapter 5.2.2 Inorganic dusts; Class III

Also with the presence of several substances of the same class, the following values are in all not allowed to be exceeded in the exhaust gas:

Mass flow:	5 g/hr
or	
Mass conc.:	1 mg/m³

Specified as Cr.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Solid
Color	Black / grey
Odor/taste	No characteristic odor.
Melting Point	1875°C
Boiling Point	2482°C
Flammability	Highly flammable
Density	7.19 g/cm^3 (20°C)
Water	Insoluble

10 STABILITY AND REACTIVITY

Stability	No particular stability concerns if handled according to specifications.
Conditions to avoid	Oxidizing agents
Hazardous Decomposition	Highly flammable in air
Products	Toxic metal oxide fume.

11 TOXICOLOGICAL INFORMATION

Acute toxicity
no data available
Skin corrosion/irritation
no data available
Serious eye damage/eye irritation
no data available
Respiratory or skin sensitization
no data available
Germ cell mutagenicity
no data available
Carcinogenicity
Carcinogenicity-rabbit-Implant
Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Musculoskeletal: Tumors.
Carcinogenicity-rat-Implant
Tumorigenic:Equivocal tumorigenic agent by RTECS criteria. Blood:Lymphomas including Hodgkin's disease. Tumorigenic:Tumors at site or application.
Carcinogenicity-rat-Intravenous
Tumorigenic:Equivocal tumorigenic agent by RTECS criteria. Gastrointestinal: Tumors. Blood:Lymphomas including Hodgkin's disease

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.
IARC: 3-Group 3: Not classifiable as to its carcinogenicity to humans (Chromium)

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

Inhalation-Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard

no data available

Potential health effects

Ingestion	Harmful if swallowed.
Inhalation	Harmful to mucous membranes. Chromium dusts as considered as carcinogenic to the respiratory tract.
Skin	Irritating effect
Eyes	Irritating effect
Sensitization	Sensitization possible through skin contact
Other information	Tumorigenic effects have been observed on tests with laboratory animals
Subacute to chronic toxicity	May cause a form of dermatitis May cause intestinal problems, convulsion, asphyxia

Additional Information

RTECS: Not available

Full Data on the toxicity of this product are not available. Hazardous properties cannot be excluded.

Safety Data Sheet

Chromium powder

Revision Date: 8/14/2019
Date Issued: 8/14/2019

12 ECOLOGICAL INFORMATION

Environmental hazards Avoid washing into water courses. Avoid contaminating public drains or water supply.

LC50 Fish (96 hours)

Minimum: 13,9 mg/l
Maximum: 210 mg/l
Median: 40,5 mg/l
Study number: 16

Reference for median: Dorn, P.B., J.P. Salanitro, S.H. Evans, and L. Kravetz 1993. Assessing the Aquatic Hazard of Some Branched and Linear Nonionic Surfactants by Biodegradation and Toxicity. Environ.Toxicol.Chem. 12(10):1751-1762; Hori, H., M. Tateishi, K. Takayanagi, and H. Yamada 1996. Applicability of Artificial Seawater as a Rearing Seawater for Toxicity Tests of Hazardous Chemicals by Marine Fish Species. Nippon Suisan Gakkaishi (Bull.Jpn.Soc.Sci.Fish.) (4):614-622 (JPN) (ENG ABS)

LC50 Crustaceans (48 hours)

Minimum: 0,022 mg/l
Maximum: 100 mg/l
Median: 0,53 mg/l
Study number: 8

Reference for median: Mount, D.I., and T.J. Norberg 1984. A Seven-Day Life-Cycle Cladoceran Toxicity Test. Environ.Toxicol.Chem. 3(3):425-434 (Author Communication Used); Govindarajan, S., C.P. Valsaraj, R. Mohan, V. Hariprasad, and R. Ramasubramanian 1993. Toxicity of Heavy Metals in Aquaculture Organisms: Penaeus indicus, Perna viridis, Artemia salina and Skeletonema costatum. Pollut.Res. 12(3):187-189

EC50 Crustaceans (48 hours)

Minimum: 0,07 mg/l
Maximum: 0,07 mg/l
Median: 0,07 mg/l
Study number: 1

Reference for median: Dorn, P.B., J.P. Salanitro, S.H. Evans, and L. Kravetz 1993. Assessing the Aquatic Hazard of Some Branched and Linear Nonionic Surfactants by Biodegradation and Toxicity. Environ.Toxicol.Chem. 12(10):1751-1762

EC50 Algae (72 or 96 hours)

Test duration:	72	hours
Minimum:	0,1 mg/l	
Maximum:	17,8 mg/l	
Median:	8,75 mg/l	
Study number:	4	

Reference for median: Stauber, J.L. 1995. Toxicity Testing Using Marine and Freshwater Unicellular Algae. Australas.J.Ecotoxicol. 1(1):15-24

13 DISPOSAL CONSIDERATIONS

Disposal method

Contact specialist disposal companies. Dispose of in accordance with Local Authority requirements. Recover and reclaim or recycle, if practical.

14 TRANSPORT INFORMATION

UN number: UN 3089

UN proper shipping name

ADR/RID:	METAL POWDER, FLAMMABLE, N.O.S. (CHROMIUM)
IMDG:	METAL POWDER, FLAMMABLE, N.O.S. (CHROMIUM)
IATA:	Metal powder, flammable, n.o.s. (chromium)

Transport hazard class(es)

ADR/RID:	4.1
IMDG:	4.1
IATA:	4.1

Packaging group

ADR/RID:	II
IMDG:	II
IATA:	II

Safety Data Sheet

Chromium powder

Revision Date: 8/14/2019
Date Issued: 8/14/2019

15 REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

no data available

Chemical Safety Assessment

no data available

Country specific information:
Germany

WGK 3 (self classification) - severe hazard to waters.

16 OTHER INFORMATION

DISCLAIMER

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPOSED TO BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. IOLITEC SHALL NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING OR FROM CONTACT WITH THE ABOVE PRODUCT. THIS INFORMATION RELATES ONLY TO THE SPECIFIC MATERIAL DESIGNATED AND MAY NOT BE VALID FOR SUCH MATERIAL USED IN COMBINATION WITH ANY OTHER MATERIALS OR ANY PROCESS. IT IS THE USERE'S RESPONISIBILTY TO SATISFY HIMSELF AS TO THE SUITABILITY OF SUCH INFORMATION FOR HIS OWN PARTICULAR USE.

IN NO WAY SHALL IOLITEC BE LIABLE FOR ANY CLAIMS, LOSSES OR DAMAGES OF ANY THIRD PARTY OR FOR THE LOST PROFITS OR ANY SPECIAL, INDIRECT, INCIDENTAL, CONSEQUENTIAL OR EXEMPLARY DAMAGES, HOWSOEVER ARISING, EVEN IF THE COMPANY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.