



Safety Data Sheet Cobalt(II,III) oxide

Section 1: Chemical Product and Company Identification		
Product Name: Cobalt (II,III) oxide	Contact Information:	
Catalog Codes: 525		
CAS#: 1308-06-1	Email: info@drm-chem.com	
RTECS: No data available	Address: #7, Afshar javan Alley, Sohrevardi St ,Tehran, Iran	
Synonym: Cobaltosic oxide, Tricobalt tetraoxide		
Chemical Name: Cobalt(II.III) oxide	post code: 1551818111	
Chamical Formula: Co O	Tehran Sales: +98 21 88177760	
	Order Online: Drm-chem.com	

Section 2: Composition and Information on Ingredients			
Composition:			
Name	CAS #	% by Weight	
Cobalt oxide	1308-06-1	100	
Toxicological Data on Ingredients: LD50 Oral - Rat - > 5.000 mg/kg. LD50 Dermal - Rat - > 2.000 mg/kg.			

Section 3: Hazards Identification		
Classification of the substance or mixture		
Classification according to Regulation (EC) No 1272/2008 Respiratory sensitization (Category 1), H334 Carcinogenicity, Inhalation (Category 1A), H350i Long-term (chronic) aquatic hazard (Category 3), H412 For the full text of the H-Statements mentioned in this Section, see Section 16.		
Label elements		

Labelling according Regulation (EC) No 1272/2008 Pictogram



Danger		
May cause allergy or asthma symptoms or breathing difficulties if inhaled.		
May cause cancer by inhalation.		
Harmful to aquatic life with long lasting effects.		
Precautionary statement(s)		
Obtain special instructions before use.		
Avoid release to the environment.		
IF exposed or concerned: Get medical advice/ attention.		
Hazard		
none		

Restricted to professional users.

Reduced Labeling (<= 125 ml)

Pictogram



Signal word Hazard statement(s)	Danger			
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.			
H350i	May cause cancer by inhalation.			
H412	Harmful to aquatic life with long lasting effects.			
Precautionary statement(s)				
P201	Obtain special instructions before use.			
P308 + P313	IF exposed or concerned: Get medical advice/ attention.			
Supplemental Hazard	none			
Statements				
Other hazards				
This substance/mixture contains no components considered to be either persistent, pioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at				

levels of 0.1% or higher.

Section 4: First Aid Measures

Description of first-aid measures

General advice

Consult a physician. Show this material safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 3) and/or in section 11

Indication of any immediate medical attention and special treatment needed No data available

No data available

Section 5: Fire and Explosion Data

Extinguishing media Suitable extinguishing media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture Cobalt/cobalt oxides

Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Further information

No data available

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Reference to other sections

For disposal see section 13.

Section 7: Handling and Storage

Precautions for safe handling

Advice on safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Advice on safe handling

Avoid exposure - obtain special instructions before use.

Advice on protection against fire and explosion

Provide appropriate exhaust ventilation at places where dust is formed.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

For precautions see section 3.

Conditions for safe storage, including any incompatibilities

Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Store in cool place. hygroscopic

Section 8: Exposure Controls/Personal Protection

Control parameters Ingredients with workplace control parameters Exposure controls

Personal protective equipment

Eye/face protection

Face shield and safety glasses 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 Regulation (EU) 2016/425 and the standard EN 374 derived from it. Full contact Material: Nature latex/chloroprene Minimum layer thickness: 0,6 mm Break through time: > 480 min

Material tested:Lapren® (KCL 706 / Aldrich Z677558, Size M)

Splash contact Material: Nature latex/chloroprene Minimum layer thickness: 0,6 mm Break through time: > 480 min Material tested:Lapren® (KCL 706 / Aldrich Z677558, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a fullface particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Section 9: Physical and Chemical Properties

Information on basic physical Appearance	ical and chemical properties Form: powder Color: black
b) Odor	No data available
c) Odor Threshold	No data available
d) pH	No data available
e) Melting point/freezing point	895 °C
f) Initial boiling point and boiling range	900°C
g) Flash point	No data available
h) Evaporation rate	No data available
i) Flammability (solid,gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapor pressure	No data available
I) Vapor density	No data available
m) Density	6,11 g/mL at 25 °C - lit.
Relative density	6,11 at 20 °C
n) Water solubility	Insoluble
o) Partition coefficient: n-octanol/water	No data available
p) Autoignition temperature	No data available
q) Decomposition temperature	> 900 °C –
r) Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: No data available

No data available

t) Oxidizing properties No data available

Other safety information No data available

Section 10: Stability and Reactivity Data

Reactivity No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions No data available

Conditions to avoid Avoid moisture.

Incompatible materials Reducing agents

Hazardous decomposition products

In the event of fire: see section 5

Section 11: Toxicological Information

Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - > 5.000 mg/kg (OECD Test Guideline 401) LC50 Inhalation - Rat - 4 h - > 4,83 mg/l (OECD Test Guideline 403) LD50 Dermal - Rat - > 2.000 mg/kg (OECD Test Guideline 402)

Skin corrosion/irritation

Skin - Rabbit Result: No skin irritation (OECD Test Guideline 404)

Serious eye damage/eye irritation Eyes - Rabbit Result: No eye irritation (OECD Test Guideline 405)

Respiratory or skin sensitization

May cause allergy or asthma symptoms or breathing difficulties if inhaled. (ECHA)

Germ cell mutagenicity

Test Type: in vitro test Test system: mouse lymphoma cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative Test Type: Mammalian bone marrow sister chromatid exchange Species: Rat Application Route: Oral Method: OECD Test Guideline 475 Result: negative

Carcinogenicity No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure No data available

Specific target organ toxicity - repeated exposure No data available

Aspiration hazard

No data available

Additional Information

Effects due to ingestion may include:, Burning pain in mouth, throat and stomach., Prolonged or repeated exposure may cause:, Fatigue, Cardiac irregularities, Convulsions, Vomiting To the best of our knowledge, the chemical, physical, and toxicological properties have not

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Symptoms of an acute cobalt intoxication: diarrhoea, loss of appetite, drop in body temperature, drop in blood pressure. Toxic effect on kidneys (proteinuria, anuria), heart, and pancreas.

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

Section 12: Ecological Information

Toxicity

Toxicity to fish LC50 - Danio rerio (zebra fish) - > 136 mg/l - 96 h (OECD Test Guideline 203)

Toxicity

Toxicity to fish	LC50 - Danio rerio (zebra fish) - > 136 mg/l - 96 h (OECD Test Guideline 203) Remarks: (above the solubility limit in the test medium)
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - > 136 mg/l - 48 h (OECD Test Guideline 202) Remarks: (above the solubility limit in the test medium)
Toxicity to algae	IC50 - Pseudokirchneriella subcapitata (green algae) - 88 mg/l – 72 h (OECD Test Guideline 201) Remarks: (above the solubility limit in the test medium)

Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

Bioaccumulative potential

No data available

Mobility in soil No data available

Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Other adverse effects

Harmful to aquatic life with long lasting effects. Discharge into the environment must be avoided.

Section 13: Disposal Considerations

Waste treatment methods

Product

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself

Section 14: Transport Information			
		1474.	
ADR/RID: -	IMDG: -	IATA: -	
UN proper shipping name ADR/RID: Not dangerous goods IMDG: Not dangerous goods IATA: Not dangerous goods			
Transport hazard class(es) ADR/RID: -	IMDG: -	IATA: -	
Packaging group ADR/RID: -	IMDG: -	IATA: -	
Environmental hazards ADR/RID: no	IMDG Marine pollutant: no	IATA: no	
Special precautions for user Further information Not classified as dangerous in the meaning of transport regulations.			

Section 15: Other Regulatory Information

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

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

Authorisations and/or restrictions on use

REACH - Restrictions on the manufacture, : Nickel oxide placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)

Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

Section 16: Other Information

References: Not available

Other Special Considerations: Not available

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