

# SAFETY DATA SHEET

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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

Product name : C@[ { ^ÁÚcã^Ö!^^}

REACH Substance Name : Chromium oxide

REACH Registration number : 01-2119433951-39-0000

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

Suitable uses : Colorants (pigments and dyestuffs), inorganic

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

Supplier : fYjXnYjhBUi fZfVYb; a V<  
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WWW@}^kEJÉDÉÉÉÉÉÉÉÉÉÉ-mail: info@|^ã^:ãã^  
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## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Classification : Not classified.

**Classification according to Directive 67/548/EEC [DSD]**

Classification : Not classified.

### 2.2 Label elements

Hazard pictograms : Not applicable.

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

### Precautionary statements

Prevention : Not applicable.

Response : Not applicable.

Storage : Not applicable.

Disposal : Not applicable.

### 2.3 Other hazards

Other hazards which do not result in classification : Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat.

## SECTION 3: Composition/information on ingredients

Product definition (REACH) : Mono-constituent substance

Cr2O3

Product/ingredient name	Identifiers	%	Classification	
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]
chromium oxide	REACH #: 01-2119433951-39 EC: 215-160-9 CAS: 1308-38-9	98.5 - 99.5	Not classified.  See section 16 for the full text of the R-phrases declared above	Not classified.  See Section 16 for the full text of the H statements declared above.

Occupational exposure limits, if available, are listed in Section 8.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

- Inhalation** : Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention if symptoms occur. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Ingestion** : No special measures required.
- Skin contact** : No special measures required.
- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

### 4.2 Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

### 4.3 Indication of any immediate medical attention and special treatment needed

See Section 11 for more detailed information on health effects and symptoms.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media** : In case of fire, use water spray (fog), foam, dry chemical or CO<sub>2</sub>.

**Unsuitable extinguishing media** : None known.

### 5.2 Special hazards arising from the substance or mixture

**Hazards from the substance or mixture** : No specific fire or explosion hazard.

**Hazardous combustion products** : No specific data.

### 5.3 Advice for firefighters

**Special precautions for fire-fighters** : Not applicable.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## SECTION 6: Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures** : No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Avoid breathing dust. Provide adequate ventilation. Put on appropriate personal protective equipment (see Section 8). Hazard of slipping on spilt product.

**6.2 Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### 6.3 Methods and materials for containment and cleaning up

**Small spill** : Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.

**Large spill** : Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labelled waste container. Avoid creating dusty conditions and prevent wind dispersal. Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.

**6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

**7.1 Precautions for safe handling** : No special measures required.

**7.2 Conditions for safe storage, including any incompatibilities** : No special measures required.

### 7.3 Specific end use(s)

**Recommendations** : Not available.

**Industrial sector specific solutions** : Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

<u>Ingredient name</u>	<u>Occupational exposure limits</u>
chromium oxide	EU OEL (Europe, 12/2009). TWA: 2 MG/M3 8 hour(s).

<u>Derived effect levels</u>					
<u>Ingredient name</u>	<u>Type</u>	<u>Exposure</u>	<u>Value</u>	<u>Population</u>	<u>Effects</u>
chromium oxide	DNEL	Short term Inhalation	2 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Inhalation	0,5 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Inhalation	0,5 mg/m <sup>3</sup>	Consumers	Local
<b>Conclusion/Summary</b>		: Not available.			

<u>Predicted effect concentrations</u>						
<u>Ingredient name</u>	<u>Type</u>	<u>Compartment Detail</u>	<u>Value</u>	<u>Method Detail</u>		
Cr III	PNEC	soil	3,2 mg/kg dwt	-		
		Sewage Treatment Plant	10 mg/l	-		
	PNEC	Marine water sediment	1,31 mg/kg dwt	-		
	PNEC	Marine water	0,0047 mg/l	-		
	PNEC	Intermittent release.	0,0047 mg/l	-		
	PNEC	Fresh water sediment	18,2 mg/kg dwt	-		
	PNEC	Fresh water	0,0047 mg/l	-		
	<b>Conclusion/Summary</b>		: Not available.			

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

### 8.2 Exposure controls

#### Risk management measures

##### Occupational exposure controls

**Technical measures** : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

##### Personal protection measures

**Respiratory protection** : Recommended: Dust-protection mask

**Hand protection** : Recommended: gloves

**Ingredient name**

**Occupational exposure limits**

- Eye protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If operating conditions cause high dust concentrations to be produced, use dust goggles.  
Recommended: safety glasses with side-shields
- Skin protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Environmental exposure controls**

- Technical measures** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**SECTION 9: Physical and chemical properties**

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

**General information**

**Appearance**

- Physical state** : Solid. [powders]
- Colour** : Green.
- Odour** : Odourless.

**Important health, safety and environmental information**

- pH** : 5 to 7 [Conc. (% w/w): 5%]
- Boiling point** : 4000 °C (1013 hPa)
- Melting point** : 2435°C (4415°F)
- Density** : 5,2 kg/L (20 °C)
- Solubility** : 0,00000313 Cr III g/l (water, pH 6)

**9.2 Other information**

No additional information.

**SECTION 10: Stability and reactivity**

- 10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- 10.2 Chemical stability** : The product is stable.
- 10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- 10.4 Conditions to avoid** : No specific data.

- 10.5 Incompatible materials** : No specific data.
- 10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Potential acute health effects

**Eye contact** : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure	Test
chromium oxide	LD50 Oral	- Rat	>5000 mg/kg	-	OECD 401 Acute Oral Toxicity
chromium oxide	LC50 Inhalation Dusts and mists	- Rat	>5,41 mg/l	4 hours	OECD 403 Acute Inhalation Toxicity

#### Irritation/Corrosion

**Skin** : chromium oxide:Non-irritating

**Eyes** : chromium oxide:Non-irritating

**Respiratory** : chromium oxide:Non-irritating

#### Sensitiser

Product/ingredient name	Route of exposure	Species	Result	Test description
chromium oxide	skin	Guinea pig	Not sensitizing	406 Skin Sensitization
<b>Skin</b>			: chromium oxide:Not sensitizing	
<b>Respiratory</b>			: chromium oxide:Not sensitizing	

#### Potential chronic health effects

##### Mutagenicity

Product/ingredient name	Test	Experiment	Result
chromium oxide	OECD 471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative

**Chronic effects** : Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Test	Result	Species	Exposure
chromium oxide	ISO 8192	Acute EC50 >10000 mg/l	- Bacteria - Activated sludge	3 hours
	ISO 7346-1	Acute LC50 >10000 mg/L Fresh water	- Fish - Danio rerio	96 hours

Product/ingredient name	Test	Result	Species	Exposure
Conclusion/Summary	:	Not available.		
<b>12.2 Persistence and degradability</b>				
Conclusion/Summary	:	Not available.		
<b>12.3 Bioaccumulative potential</b>				
Not available.				
<b>12.4 Mobility in soil</b>				
Soil/water partition coefficient (K <sub>oc</sub> )	:	Not available.		
Mobility	:	Not available.		
<b>12.5 Results of PBT and vPvB assessment</b>				
PBT	:	Not applicable.		
vPvB	:	Not applicable.		
<b>12.6 Other adverse effects</b>				
Other adverse effects	:	Not available.		
AOX	:	The product does not contain organically bound halogens which could lead to an AOX value in waste water.		
Remarks	:	No known significant effects or critical hazards.		

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

- Methods of disposal** : Examine possibilities for re-utilisation. Product residues and uncleaned empty containers should be packaged, sealed, labelled, and disposed of or recycled according to relevant national and local regulations. Where large quantities are concerned, consult the supplier. When uncleaned empty containers are passed on, the recipient must be warned of any possible hazard that may be caused by residues. For disposal within the EC, the appropriate code according to the European Waste List (EWL) should be used. It is among the tasks of the polluter to assign the waste to waste codes specific to industrial sectors and processes according to the European Waste List (EWL).
- Hazardous waste** : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 91/689/EEC.

#### Packaging

- Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
- Special precautions** : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

	ADR/RID	ADN/ADNR	IMDG	IATA
14.1 UN number	-	-	-	-
14.2 UN proper shipping name	-	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
14.3 Transport hazard class(es)/Marks	-	-	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	<input checked="" type="checkbox"/> No.	<input checked="" type="checkbox"/> No.	<input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> No
14.6 Special precautions for user/Additional information	Not regulated.	Not regulated.	Not regulated.	Not regulated.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

**Hazard notes:**

Not dangerous cargo.

Keep dry.

Keep separated from foodstuffs.

## SECTION 15: Regulatory information

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

**EU Regulation (EC) No. 1907/2006 (REACH)**

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles :  Not applicable.

15.2 Chemical Safety Assessment :  Not applicable.



## SECTION 16: Other information

**Abbreviations and acronyms** : ATE = Acute Toxicity Estimate  
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
DNEL = Derived No Effect Level  
EUH statement = CLP-specific Hazard statement  
PNEC = Predicted No Effect Concentration  
RRN = REACH Registration Number

### History

**Date of issue** : 2011-10-11  
**Date of previous issue** : 2009-03-09  
**Version** : 3

☑ Indicates information that has changed from previously issued version.

### Notice to reader

*The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet and its Annex [if required according to Regulation (EC) 1907/2006 (REACH)] is to describe the products in terms of their safety requirements. The given details do not imply any guarantee concerning the composition, properties or performance.*