

**Section 1. Identification****1.1 Product Identifier** 0179

Product Name	CHROMIUM (VI) OXIDE pure
CAS Number	1333-82-0
REACH Registration No	A registration number is not available as the substance or its uses are exempt, the annual tonnage does not require a registration or the registration is envisaged for a later date.
Molecular Formula	$\text{CrO}_3$ , =99.99

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

Uses of Material	Chemical for industrial and laboratory use. Not suitable for domestic use.
------------------	----------------------------------------------------------------------------

**1.3 Supplier** Vickers Laboratories Ltd

Grangefield Industrial Estate  
Richardshaw Road  
Pudsey  
West Yorkshire  
LS28 6QW  
UNITED KINGDOM

Phone	44 0113 2362811
Fax	+44(0)113 2362703
Email	safety@viclabs.co.uk
Website	www.viclabs.co.uk

**1.4 Emergency Telephone** (08:00-16:30) +44(0) 113 2362811  
(24hr) 112  
(Have this document to hand)**Section 2. Hazards Identification****2.1 Classification of the substance or mixture****Classification according to regulation 1272/2008/EC**

Oxidising solid, category 1	H271: May cause fire or explosion; strong oxidizer.
Acute toxicity, category 2 (dermal)	H310: Fatal in contact with skin.
Acute toxicity, category 2 (inhalation)	H330: Fatal if inhaled.
Acute toxicity, category 3 (oral)	H301: Toxic if swallowed.
Skin corrosion/irritation, category 1A	H314: Causes severe skin burns and eye damage.
Respiratory sensitization, category 1	H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin sensitization, category 1	H317: May cause an allergic skin reaction.
Germ cell mutagenicity, category 1B	H340: May cause genetic defects.
Carcinogenicity, category 1A	H350: May cause cancer.
Reproductive toxicity, category 2	H361: Suspected of damaging fertility or the unborn child.
Spec target organ tox - repeat, category 1	H372: Causes damage to organs through prolonged or repeated exposure.
Hazard to aquatic environment, category 1	H400: Very toxic to aquatic life.
Hazard to aquatic environment, category 1	H410: Very toxic to aquatic life with long lasting effects.

**2.2 Label elements****Labelling according to regulation 1272/2008/EC**

Signal word

Danger

Hazard Pictograms



Hazard Statements

May cause fire or explosion; strong oxidizer. May cause cancer. May cause genetic defects. Suspected of damaging fertility or the unborn child. Fatal if inhaled. Fatal in contact with skin. Toxic if swallowed. Causes damage to organs through prolonged or repeated exposure. Causes severe skin burns and eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. Very toxic to aquatic life with long lasting effects.

Precautionary Statements

Keep away from heat / sparks/open flames/hot surfaces - No smoking. Keep / Store away from clothing / combustible materials. Take any precaution to avoid mixing with combustibles... Wear protective gloves / protective clothing / eye protection.

## Section 3. Composition

### 3.1 Substances

Component	CAS No.	EEC No.	REACH No.	Conc w/w	CLP Classification (1272/2008/CE)
Ammonium Dichromate	7789-09-5	232-143-1		>99.7%	Ox. Sol. 2, Acute Tox. 2 (I), Acute Tox. 3 (O), Skin Corr. 1B, Acute Tox. 4 (D), Resp. Sens. 1, Skin Sens. 1, Muta. 1B, Carc. 1B, Repr. 1B, STOT RE 1, Aquatic Chronic 1

## Section 4. First Aid

### 4.1 Description of first aid measures

Eyes	Irrigate thoroughly with plenty of water for at least 10 minutes, holding the eye open. Unless contact has been slight OBTAIN MEDICAL ATTENTION
Skin	Wash off skin thoroughly with water. Remove contaminated clothing immediately and wash before re-use. Unless contact has been slight OBTAIN MEDICAL ATTENTION
Inhalation	Remove from exposure. Irrigate mouth and nasal passage with water. OBTAIN MEDICAL ATTENTION.
Ingestion	If conscious give several glasses of water to drink and 5-10g of ascorbic acid dissolved in water. Do not induce vomiting. If unconscious place in the recovery position. OBTAIN MEDICAL ATTENTION URGENTLY.
Personal protection for first aiders	Wear protective gloves / eye protection.

### 4.2 Most important symptoms and effects, both acute & 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. Fire Fighting

### 5.1 Extinguishing media

Extinguishing Media	Consider what other flammable materials are present and act accordingly.
Unsuitable Media	Nothing specified.

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

Hazards	Not combustible but assists burning. Contact with combustible material may cause a fire.
---------	------------------------------------------------------------------------------------------

### 5.3 Advice for firefighters

Advice for firefighters	Fire-fighters should wear protective clothing and breathing apparatus.
-------------------------	------------------------------------------------------------------------

## Section 6. Accidental Release Measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Personal Protection Avoid breathing dust-wear respiratory protective equipment. Evacuate area immediately. Do not allow general use of area until it is safe to do so.

### 6.2 Environmental precautions

Environmental Keep material out of sewers, storm drains, surface waters and soil. Notify the Environmental Agency and local Environmental Health Officer if major spillage occurs. Keep combustible material away from spillage.

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

Major Spillage Shovel/sweep up into container for removal Small areas of contamination should be treated with ferrous sulphate solution to reduce the chromium to the safer (trivalent) form and the pH adjusted to 8.5 prior to disposal. Wash area down with copious amounts of water.

Minor Spillage Vacuum up into container for removal. Carefully remove material from vacuum cleaner and transfer to sealable container for disposal. Carry out this operation under fume extraction. Small areas of contamination should be treated with ferrous sulphate solution to reduce the chromium to the safer (trivalent) form and the pH adjusted to 8.5 prior to disposal. Wash area down with copious amounts of water.

### 6.4 Reference to other sections

See section 8.2 for information on protective equipment and section 13 for information on disposal.

## Section 7. Storage & Handling

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Do not breath dust. Do not allow to contaminate clothing.

Ensure Local Exhaust Ventilation maintains dust concentrations below the recommended limits.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in a suitable area for oxidising agents. Do not store on wooden surfaces. Keep well separated from combustible materials.

### 7.3 Specific end use(s)

See section 1.2.

## Section 8. Workplace Exposure & Personal Protection

### 8.1 Control parameters

Component	CAS No	Concentration	Workplace Exposure Limits			
			Long Term (8hr TWA)	Short Term 15min period		
Ammonium Dichromate	7789-09-5	>99.7%	-	-	0.05 ppm	-

Exposure data source(s) IOELV: Indicative Occupational Exposure Limit Value.

### 8.2 Exposure controls

Respiratory Protection Use L.E.V. or natural ventilation to maintain dust concentrations below exposure limits. If not, use a well maintained chemical cartridge respirator, or use self contained breathing apparatus.

Hand Protection Use nitrile gloves or PVC gauntlets.

Eye Protection Use tightly fitting chemical splash proof glasses or goggles.

Skin Protection Avoid contact with skin. If skin contact or contamination of clothing is likely, protective clothing must be worn.

Special Hazards No special precautions required.

## Section 9. Physical & Chemical Properties

### 9.1 Information on basic physical and chemical properties

Appearance Dark red flakes.

Odour	Odourless.
pH	1 @ 20 °C solution.
Boiling Point	250 °C (Decomposes)
Melting Point	196 °C
Flash Point	Not applicable
Upper Flammable Limit	Not applicable
Lower Flammable Limit	Not applicable
Auto Ignition	Not applicable
Explosive Properties	No.
Oxidising Properties	A strong oxidising agent.
Vapour Pressure	Not applicable
Relative Density	2.7000
Water Solubility	63%

## 9.2 Other information

No data available.

## Section 10. Stability & Reactivity

10.1 Reactivity	No data available.
10.2 Chemical Stability	Stable under normal conditions but starts to decompose at 500C liberating oxygen.
10.3 Possibility of hazardous reactions	No data available.
10.4 Conditions to Avoid	No specific conditions.
10.5 Incompatible Materials	Many organic compounds. Combustible materials. Acids. Alkalis.
10.6 Hazardous Decomposition Products	Liberates oxygen on decomposition which will assist in a fire.

## Section 11. Toxicological Information

### 11.1 Information on toxicological effects

Eyes	Contact with the solid or solution will be extremely irritating to eyes and can cause chemical eye burns.
Skin	The liquid and solutions are strong skin irritants and can cause moderate to severe burns. Contact with broken skin may lead to ulcers especially on the hands and forearms. Can be absorbed through the skin and cause systemic poisoning and subsequent kidney damage.
LD50 Skin	57mg/kg Rabbit
Ingestion	Ingestion will cause severe internal irritation and damage, nausea, vomiting, abdominal pains and diarrhoea. Fatal dose in man appears to be 3-5g.
LD50 Oral	52mg/kg Rat
Inhalation	Inhalation of dust will produce severe irritation of the eyes, nose, throat and respiratory tract. Causes inflammation of the larynx, bronchitis, and ulceration of the nasal septum.
LD50 Inhalation	Not available
TCLo	Not available
Carcinogenicity	It is suspected as a long term carcinogen in man but evidence is inconclusive.
Mutagenicity	A mutagen.
Reproductive Effects	No information is available.

## Section 12. Ecological

12.1 Toxicity	Data for chromium ions in general [calculated as sodium chromate] : Toxic to fish >52 mg/l LC50 : Algae toxic >5mg/l : Daphnia toxic > 0.32 mg/l. Very Toxic to aquatic organisms and may cause long term adverse effects in the aquatic environment.
LC50 Algal	Not available
LC50 Crustacea	Not available
LC50 Fish	Not available
12.2 Persistence and degradability	No data available.

12.3	Bioaccumulative potential	No data available.
12.4	Mobility in soil	No data available.
12.5	Results of PBT & vPvB assessment	Assessment not required.
12.6	Other adverse effects	None known at present.

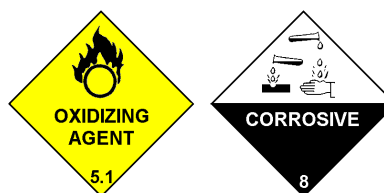
## Section 13. Disposal Considerations

### 13.1 Waste treatment methods

Disposal Methods	Never dispose of into water courses or sewerage systems. Treat with ferrous sulphate solution to reduce the chromium to the safer (trivalent) form. The pH should be adjusted to 8.5, with sodium hydroxide or sodium carbonate, prior to disposal.
Contaminated Packaging	Use a licensed waste disposer.

## Section 14. Transport Information

14.1	UN Number	1463
14.2	Proper Shipping Name	Chromium trioxide
14.3	Transport classes	
	UN classification	5.1
	Subsidiary hazard(s)	8
	Transport category	2
	ADR Hazard ID	58
	Tunnel Restriction Code	E
14.4	Packing Group	II
14.5	Environment hazards	See section 12.
14.6	Special precautions for user	No special precautions required.
14.7	Transport in bulk	Not transported in bulk.



## Section 15. Regulatory Information

### 15.1 Safety, health and environment regulations specific for substance/mixture.

#### Classification, Labeling & Packaging of Substances & Mixtures Regulations (1272/2008/CE)

Classification	Oxidising solid, category 1; Acute toxicity, category 2 (dermal); Acute toxicity, category 2 (inhalation); Skin corrosion/irritation, category 1A; Acute toxicity, category 3 (oral); Respiratory sensitization, category 1; Skin sensitization, category 1; Germ cell mutagenicity, category 1B; Carcinogenicity, category 1A; Reproductive toxicity, category 2; Spec target organ tox - repeat, category 1; Hazard to aquatic environment, category 1; Hazard to aquatic environment, category 1
Signal word	Danger
Hazard Pictograms	
Hazard Statements	H271, H350, H340, H361, H330, H310, H301, H372, H314, H334, H317, H400+H410 May cause fire or explosion; strong oxidizer. May cause cancer. May cause genetic defects. Suspected of damaging fertility or the unborn child. Fatal if inhaled. Fatal in contact with skin. Toxic if swallowed. Causes damage to organs through prolonged or repeated exposure. Causes severe skin burns and eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. Very toxic to aquatic life with long lasting effects.
Precautionary Statements	P210, P220, P221, P280 Keep away from heat / sparks/open flames/hot surfaces - No smoking. Keep / Store away from clothing / combustible materials. Take any precaution to avoid mixing with combustibles... Wear protective gloves / protective clothing / eye protection.

## 15.2 Chemical safety assessment

Assessment not required.

## Section 16. Other Information

The information contained in this document only covers the hazards presented by this material, it DOES NOT constitute a workplace risk assessment. See sections 11 for toxicological information and section 12 for ecological information.

Revision number: 1.2 (Supercedes revision 1.1)

Revision date: 16 April 2021

Reviewed by chemist: 16 April 2021

Printed date: 12 August 2023

Copyright: 2023 Vickers Laboratories Ltd