

SAFETY DATA SHEET

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

1.1 Product identifiers

Product name	Chromic Trioxide
CAS number	1333-82-0
Synonyms	Chromic trioxide; chromic anhydride

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

Identified uses	Laboratory Chemicals
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1.3 Details of the supplier of the safety data sheet

Company	Lab Alley, LLC 12501 Pauls Valley Road Austin, Texas 78737 U.S.A.
Telephone	512-668-9918
Fax	512-886-4008

1.4 Emergency telephone

Emergency Phone #	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC


SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Oxidizing solids Category 1
 Acute oral toxicity Category 3
 Acute dermal toxicity Category 2
 Acute Inhalation toxicity - Dust and Mists Category 2
 Skin Corrosion/Irritation Category 1A
 Serious Eye Damage/Eye Irritation Category 1
 Respiratory Sensization Category 1
 Skin Sensitization Category 1
 Germ Cell Mutagenicity Category 1B
 Carcinogenicity Category 1A
 Reproductive Toxicity Category 2
 Specific target organ toxicity (single exposure) Category 3
 Target Organs - Respiratory system.
 Specific target organ toxicity (repeated exposure) Category 1
 Target Organs - Liver, Kidney, Blood.

2.2 GHS Label elements, including precautionary statements

Pictogram	
Signal Word	Danger
Hazard statements	<p>May cause fire or explosion; strong oxidizer. Toxic if swallowed. Causes severe skin burns and eye damage. May cause respiratory irritation. May cause allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause genetic defects. May cause cancer. Suspected of damaging fertility. Causes damage to organs through prolonged or repeated exposure. Fatal in contact with skin or if inhaled</p>

Precautionary statements

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Do not get in eyes, on skin, or on clothing. Do not breathe dust/fumes/gas/mist/vapors/spray. Use only outdoors or in a wellventilated area. Wear respiratory protection. In case of inadequate ventilation wear respiratory protection. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves. Keep away from heat/sparks/open flames/hot surface. No smoking. Keep/store away from clothing/other combustible materials. Take any precaution to avoid mixing with combustibles. Wear fire/flame resistant/retardant clothing.

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

IF ON SKIN: Gently wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention. IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothing. Rinse skin with water/shower.

May cause fire or explosion; strong oxidizer. Toxic if swallowed. Causes severe skin burns and eye damage. May cause respiratory irritation. May cause allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause genetic defects. May cause cancer. Suspected of damaging fertility. Causes damage to organs through prolonged or repeated exposure. Fatal in contact with skin or if inhaled.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Very toxic to aquatic life with long lasting effects.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Chromium trioxide	Chromic trioxide; chromic anhydride	1333-82-0	>95%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled

Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.

In case of skin contact

Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

In case of eye contact	In cause of contact with eyes, rinse immediately with plenty of water and seek medical advice. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
If swallowed	Do NOT induce vomiting. Call a physician or poison control center immediately.

4.2 Most important symptoms and effects, both acute and delayed

Causes burns by all exposure routes. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause allergic skin reaction. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation: Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media Substance is nonflammable; use agent most appropriate to extinguish surrounding fire. CO₂, dry chemical, dry sand, alcohol-resistant foam.

Unsuitable extinguishing media No information available.

5.2 Specific hazards arising from the substance or mixture

The product causes burns of eyes, skin and mucous membranes. Oxidizer: Contact with combustible/organic material may cause fire. May ignite combustibles (wood paper, oil, clothing, etc). Do not allow run-off from fire-fighting to enter drains or water sources. Hazardous combustion products: Toxic fumes.

5.3 Special protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

5.4 Further information

Flash Point No data available.

Autoignition Temperature No information available.

Explosion limits

Upper No data available.

Lower No data available.

Sensitivity to Mechanical Impact No information available.

Sensitivity to Static Discharge No information available.

NFPA

Health	Flammability	Instability	Physical hazards
4	0	1	OX

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

Use personal protective equipment as required. Evacuate personnel to safe areas. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid dust formation.

6.2 Environmental precautions

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel into suitable containers for disposal. Avoid dust formation. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Sweep up with shovel into suitable containers for disposal.

6.4 Reference to other sections

See section 2 for full list of hazard and precaution statements.

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not ingest. If swallowed then seek immediate medical assistance. Do not breathe (dust, vapor, mist, gas). Avoid dust formation. Keep away from clothing and other combustible materials.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities**Storage conditions**

Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Do not store near combustible materials. Corrosives area. Store under an inert atmosphere. Protect from moisture. Incompatible Materials.

Incompatibilities

Bases, alcohols, amines, ammonia, hydrocarbons, ketones, acetones, acid anhydrides, metals, reducing agents, finely powdered metals, strong reducing agents, combustible material.

SECTION 8: Exposure controls/personal protection**8.1 Occupational exposure limits**

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Component	Type	Value
Chromium trioxide	(Vacated) Ceiling	0.1 mg/m3
	Ceiling	0.1 mg/m3

US. ACGIH Threshold Limit Values

Component	Type	Value
Chromium trioxide	TWA	0.0002 mg/m3
	STEL	0.0005 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value
Chromium trioxide	IDLH	15 mg/m3
	TWA	0.0002 mg/m3

Biological occupational exposure limits

No information available.

8.2 Exposure controls

Appropriate engineering controls

Use only under a chemical fume hood. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment**Eye/face protection**

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulation in 29 CFR 1910.133 or European Standard EN166.

Skin protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Body Protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Control of environmental exposure

No information available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Solid
Appearance	Reddish violet
Odor	Odorless
Odor Threshold	No information available.
pH	1-50 g/l aq.sol
Melting Point/Range	196 °C / 384.8 °F
Boiling Point/Range	No information available.
Evaporation Rate	No information available.
Flammability (solid)	No information available.
Flammability or explosive limit	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available.
Vapor Density	No information available.
Density	No information available.
Solubility	Soluble in water.
Partition coefficient; n-octanol/water	No information available.
Autoignition Temp	198 °C
Decomposition Temp	No information available.
Viscosity	No information available.
Molecular Formula	CrO3
Molecular Weight	99.99
VOC Content(%)	No information available.
Oxidizing properties	Oxidizer

9.2 Other safety information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

Yes.

10.2 Chemical stability

Oxidizer: Contact with combustible/organic material may cause fire. Hygroscopic.

10.3 Possibility of hazardous reactions

None under normal processing.

10.4 Conditions to avoid

Excess heat. Incompatible products. Exposure to moist air or water. Combustible material.

10.5 Incompatible materials

Bases, alcohols, amines, ammonia, hydrocarbons, ketones, acetone, acid anhydrides, metals, reducing agent, finely powdered metals, strong reducing agents, combustible material.

10.6 Hazardous decomposition products

Toxic fumes.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Chromium trioxide	80 mg/kg (rat)	57 mg/kg (rabbit)	217 mg/m3 (rat) 4h

Skin corrosion/irritation

Causes severe burns by all exposure routes.

Serious eye damage/eye irritation

Causes severe burns by all exposure routes.

Respiratory or skin sensitization

Causes severe burns by all exposure routes.

Germ cell mutagenicity

Mutagenic Ames test: positive.

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Chromium trioxide	1333-82-0	Group 1	Known	A1	X	A1

Specific target organ toxicity - single exposure

Respiratory system.

Specific target organ toxicity - repeated exposure

Liver, Kidney, Blood.

Reproductive toxicity

Possible risk of impaired fertility.

Chronic effects

No information available.

11.2 Additional Information

No information available.

SECTION 12: Ecological information

12.1 Toxicity

Product		Species	Test Results
Chromium Trioxide	LC50	Colisa fasciatus	40 mg/L 96 h static

12.2 Persistence and degradability

Soluble in water, Persistence is unlikely based on information available.

12.3 Bio accumulative potential

No information available.

12.4 Mobility in soil

Will likely be mobile in the environment due to its water solubility.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

The toxicological properties have not been fully investigated.

SECTION 13: Disposal considerations

13.1 Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national

SECTION 14: Transport information

DOT (US)

UN Number UN1463
Proper Shipping name CHROMIUM TRIOXIDE, ANHYDROUS
Hazard Class 5.1
Packaging Group II

IMDG

UN Number UN1463
Proper Shipping name CHROMIUM TRIOXIDE, ANHYDROUS
Hazard Class 5.1
Packaging Group II

IATA

UN Number	UN1463
Proper Shipping name	CHROMIUM TRIOXIDE, ANHYDROUS
Hazard Class	5.1
Packaging Group	II

SECTION 15: Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Listed (CHROMIUM TRIOXIDE) Section 6.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous

See section 2 for more information.

SARA 313 (TRI reporting)

Listed (CHROMIUM TRIOXIDE) Weight: >95%, Threshold Values %: 1.0

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Listed (CHROMIUM TRIOXIDE)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act

Listed, (CHROMIUM TRIOXIDE) Toxic Pollutants.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Not listed.

US state regulations

US. Massachusetts RTK - Substance List

Listed, (CHROMIUM TRIOXIDE).

US. New Jersey Worker and Community Right-to-Know Act

Listed, (CHROMIUM TRIOXIDE).

US. Pennsylvania Worker and Community Right-to-Know Law

Listed, (CHROMIUM TRIOXIDE).

California Proposition 65

Listed, Chromium (Hexavalent compounds) cancer, developmental, female, male.

SECTION 16: Other information

Date of Issue: 7/11/2025

SECTION 17: Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

