

SAFETY DATA SHEET

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

1.1 Product identifiers

Product name Chromium Nitrate, Reagent Grade

CAS number 7789-02-8

Synonyms Chromic nitrate

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

Identified uses Laboratory Chemicals

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)

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Oxidizing solids	Category 3
Skin Corrosion/irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Carcinogenicity	Category 1B
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Respiratory system.	

2.2 GHS Label elements, including precautionary statements

Pictogram	
Signal Word	Danger
Hazard statements	May intensify fire; oxidizer Causes skin irritation Causes serious eye irritation May cause respiratory irritation
Precautionary statements	Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep/Store away from clothing/ other combustible materials. Take any precaution to avoid mixing with combustibles. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. Wash face, hands and any exposed skin thoroughly after handling. Response: IF exposed or concerned: Get medical attention/advice. Call a POISON CENTER or doctor/physician if you feel unwell. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Fire: Explosion risk in case of fire. In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. Evacuate area. Storage: Store locked up. Store in a closed container. Store in a well-ventilated place. Keep cool. Disposal: Dispose of contents/container to an approved waste disposal plant.

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

None identified.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Chromium(III) nitrate nonahydrate	Chromic nitrate	7789-02-8	>95%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled	Move to fresh air. If breathing is difficult, give oxygen. Obtain medical attention.
In case of skin contact	Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.
In case of eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.
If swallowed	Do not induce vomiting. Obtain medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Breathing difficulties. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

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	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	No information available.

5.2 Specific hazards arising from the substance or mixture

Oxidizer: Contact with combustible/organic material may cause fire. May ignite combustibles (wood, paper, oil, clothing, etc.).
Hazardous Combustion Products: Carbon monoxide (CO) Carbon dioxide (CO₂) Nitrogen oxides (NO_x).

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 information available.

Autoignition Temperature Not applicable.

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
2	1	2	OX

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment. Avoid dust formation. Remove all sources of ignition. Take precautionary measures against static discharges.

6.2 Environmental precautions

Should not be released into the environment. See Section 12 for additional ecological information.

6.3 Methods and materials for containment and cleaning up

Sweep up or vacuum up spillage and collect in suitable container for disposal. Keep away from clothing and other combustible materials. Avoid dust formation. Remove all sources of ignition. Take precautionary measures against static discharges. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Sweep up and shovel into suitable containers for disposal.

6.4 Reference to other sections

No information available.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Wear personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Do not ingest. Keep away from clothing and other combustible materials. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. Use explosion-proof equipment. Take precautionary measures against static discharges.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store near combustible materials. Keep away from heat and sources of ignition. Flammables area.

Incompatibilities

No information available.

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(III) nitrate nonahydrate	(Vacated) TWA	0.5 mg/m3

US. ACGIH Threshold Limit Values

Component	Type	Value
Chromium(III) nitrate nonahydrate	TWA	0.5 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value
Chromium(III) nitrate nonahydrate	TWA	0.5 mg/m3
	IDLH	25 mg/m3

Biological occupational exposure limits

No information available.

8.2 Exposure controls

Appropriate engineering controls

Ensure that eyewash stations and safety showers are close to the workstation location.
Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations 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	Black
Odor	Odorless
Odor Threshold	No information available
pH	2.0 - 3.0 5% aq.sol
Melting Point/Range	60 °C / 140 °F
Boiling Point/Range	No information available
Evaporation Rate	No information available
Flammability (solid)	Not applicable
Flammability or explosive limit	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	Not applicable
Density	No information available
Solubility	No information available
Partition coefficient; n-octanol/water	No data available
Autoignition Temp	Not applicable
Decomposition Temp	100 °C
Viscosity	Not applicable
Molecular Formula	Cr N3 O9 . 9 H2 O
Molecular Weight	400.14
VOC Content(%)	No information available
Oxidizing properties	No information available

9.2 Other safety information

No information available

SECTION 10: Stability and reactivity

10.1 Reactivity

Reactive Hazard: Yes

10.2 Chemical stability

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

10.3 Possibility of hazardous reactions

None under normal processing.

Hazardous polymerization does not occur.

10.4 Conditions to avoid

Incompatible products. Excess heat. Combustible material. Avoid dust formation. Keep away from open flames, hot surfaces and sources of ignition.

10.5 Incompatible materials

Strong oxidizing agents, Reducing agents, Metals, Strong reducing agents, Combustible material.

10.6 Hazardous decomposition products

Carbon monoxide (CO), Carbon dioxide (CO₂), Nitrogen oxides (NO_x)

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Chromium(III) nitrate nonahydrate	3250 mg/kg (Rat)	Not listed	Not listed

Skin corrosion/irritation

Irritating to skin.

Serious eye damage/eye irritation

Irritating to eyes.

Respiratory or skin sensitization

Irritating to respiratory system.

Germ cell mutagenicity

No information available.

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Chromium(III) nitrate nonahydrate	7789-02-8	Not listed	Not listed	Not listed	Not listed	Not listed

Specific target organ toxicity - single exposure

Respiratory system.

Specific target organ toxicity - repeated exposure

None.

Reproductive toxicity

No information available.

Chronic effects

No information available.

11.2 Additional Information

Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

SECTION 12: Ecological information**12.1 Toxicity**

Do not empty into drains.

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

No information available.

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 hazardous waste regulations to ensure complete and accurate classification.

SECTION 14: Transport information

DOT (US)

UN Number	UN2720
Proper Shipping name	CHROMIUM NITRATE
Hazard Class	5.1
Packaging Group	III

IMDG

UN Number	UN2720
Proper Shipping name	CHROMIUM NITRATE
Hazard Class	5.1
Packaging Group	III

IATA

UN Number	UN2720
Proper Shipping name	CHROMIUM NITRATE
Hazard Class	5.1
Packaging Group	III

SECTION 15: Regulatory information

US federal regulations

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

Not applicable.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not applicable.

SARA 304 Emergency release notification

No information available.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not applicable.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

No information available.

SARA 311/312 Hazardous

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	Yes

SARA 313 (TRI reporting)

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Chromium(III) nitrate nonahydrate	7789-2-8	>95	1.0

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Component	CAS-No	HAPS Data
Chromium(III) nitrate nonahydrate	7789-2-8	X

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

No information available.

Safe Drinking Water Act

Component	CAS-No	CWA - Toxic Pollutants
Chromium(III) nitrate nonahydrate	7789-2-8	X

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

No information available.

US state regulations**US. Massachusetts RTK - Substance List**

Not listed.

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

Chromium(III) nitrate nonahydrate (Cas: 7789-2-8) is listed on the state right to know list.

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

Chromium(III) nitrate nonahydrate (Cas: 7789-2-8) is listed on the state right to know list.

California Proposition 65

This product does not contain any Proposition 65 chemicals.

SECTION 16: Other information

Date of Issue: 2/10/2019
Revision Date: 7/29/2026

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.