

1 Identification

Product identifier

Product name: Calcium chromate

Stock number: 43333

CAS Number:

13765-19-0

EC number:

237-366-8

Index number:

024-008-00-9

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

Identified use: SU24 Scientific research and development

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Alfa Aesar
Thermo Fisher Scientific Chemicals, Inc.

30 Bond Street

Ward Hill, MA 01835-8099

Tel: 800-343-0660

Fax: 800-322-4757

Email: tech@alfa.com

www.alfa.com

Information Department: Health, Safety and Environmental Department

Emergency telephone number:

During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (866) 928-0789.

2 Hazard(s) identification

Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)



GHS03 Flame over circle

Ox. Sol. 2 H272 May intensify fire; oxidizer.



GHS08 Health hazard

Carc. 1A H350 May cause cancer.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Hazards not otherwise classified No information known.

Label elements

GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)

Hazard pictograms



GHS03 GHS07 GHS08

Signal word

Danger

Hazard statements

H272 May intensify fire; oxidizer.

H302 Harmful if swallowed.

H350 May cause cancer.

Precautionary statements

P221 Take any precaution to avoid mixing with combustibles.

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P220 Keep/Store away from clothing/combustible materials.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor/.../if you feel unwell.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

WHMIS classification

C - Oxidizing materials

D1B - Toxic material causing immediate and serious toxic effects

D2A - Very toxic material causing other toxic effects



Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH 2 Health (acute effects) = 2

FIRE 0 Flammability = 0

REACTIVITY 2 Physical Hazard = 2

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Substances

CAS# Description:

13765-19-0 Calcium chromate

Product name: Calcium chromate											
<div>Identification number(s): EC number: 237-366-8 Index number: 024-008-00-9</div> <div>(Contd. of page 1)</div>											
<div>4 First-aid measures Description of first aid measures After inhalation Supply fresh air. If required, provide artificial respiration. Keep patient warm. Seek immediate medical advice. After skin contact Immediately wash with water and soap and rinse thoroughly. Seek immediate medical advice. After eye contact Rinse opened eye for several minutes under running water. Then consult a doctor. After swallowing Seek medical treatment. Information for doctor Most important symptoms and effects, both acute and delayed No further relevant information available. Indication of any immediate medical attention and special treatment needed No further relevant information available.</div>											
<div>5 Fire-fighting measures Extinguishing media Suitable extinguishing agents Product is not flammable. Use fire-fighting measures that suit the surrounding fire. For safety reasons unsuitable extinguishing agents Halocarbon extinguisher Special hazards arising from the substance or mixture This substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition. If this product is involved in a fire, the following can be released: Calcium oxide Chromium oxides Advice for firefighters Protective equipment: Wear self-contained respirator. Wear fully protective impervious suit.</div>											
<div>6 Accidental release measures Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation Environmental precautions: Do not allow product to reach sewage system or any water course. Methods and material for containment and cleaning up: Dispose of contaminated material as waste according to section 13. Prevention of secondary hazards: Acts as an oxidizing agent on organic materials such as wood, paper and fats Keep away from combustible material. Reference to other sections See Section 7 for information on safe handling See Section 8 for information on personal protection equipment. See Section 13 for disposal information.</div>											
<div>7 Handling and storage Handling Precautions for safe handling Keep container tightly sealed. Store in cool, dry place in tightly closed containers. Ensure good ventilation at the workplace. Open and handle container with care. Information about protection against explosions and fires: Substance/product can reduce the ignition temperature of flammable substances. This substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition. Conditions for safe storage, including any incompatibilities Storage Requirements to be met by storerooms and receptacles: No special requirements. Information about storage in one common storage facility: Store away from flammable substances. Store away from reducing agents. Do not store with organic materials. Store away from metal powders. Store away from oxidizing agents. Further information about storage conditions: Keep container tightly sealed. Store in cool, dry conditions in well sealed containers. Specific end use(s) No further relevant information available.</div>											
<div>8 Exposure controls/personal protection Additional information about design of technical systems: Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute. Control parameters Components with limit values that require monitoring at the workplace: 13765-19-0 Calcium chromate (100.0%)<table><tr><td>PEL (USA)</td><td>Long-term value: 0.005* mg/m³ Ceiling limit value: 0.1** mg/m³ *as Cr(VI) **as CrO3; see 29 CFR 1910.1026</td></tr><tr><td>REL (USA)</td><td>Long-term value: 0.001 mg/m³ as Cr; See Pocket Guide Apps. A and C</td></tr><tr><td>TLV (USA)</td><td>Long-term value: 0.01 mg/m³ as Cr</td></tr><tr><td>EL (Canada)</td><td>Long-term value: 0.001 mg/m³ AC/IGH A2, IARC 1</td></tr><tr><td>EV (Canada)</td><td>Long-term value: 0.001 mg/m³ as Cr</td></tr></table></div> <div>(Contd. on page 3) USA</div>		PEL (USA)	Long-term value: 0.005* mg/m³ Ceiling limit value: 0.1** mg/m³ *as Cr(VI) **as CrO3; see 29 CFR 1910.1026	REL (USA)	Long-term value: 0.001 mg/m³ as Cr; See Pocket Guide Apps. A and C	TLV (USA)	Long-term value: 0.01 mg/m³ as Cr	EL (Canada)	Long-term value: 0.001 mg/m³ AC/IGH A2, IARC 1	EV (Canada)	Long-term value: 0.001 mg/m³ as Cr
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Product name: Calcium chromate	
Additional information: No data	
Exposure controls Personal protective equipment General protective and hygienic measures The usual precautionary measures for handling chemicals should be followed. Keep away from foodstuffs, beverages and feed. Remove all soiled and contaminated clothing immediately. Wash hands before breaks and at the end of work. Store protective clothing separately. Maintain an ergonomically appropriate working environment. Breathing equipment: Use suitable respirator when high concentrations are present. Protection of hands: Impervious gloves Check protective gloves prior to each use for their proper condition. The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer. Penetration time of glove material (in minutes) Not determined Eye protection: Safety glasses Body protection: Protective work clothing.	

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9 Physical and chemical properties											
Information on basic physical and chemical properties General Information Appearance: <table><tr><td>Form:</td><td>Powder</td></tr><tr><td>Color:</td><td>Yellow</td></tr><tr><td>Odor:</td><td>Not determined</td></tr><tr><td>Odor threshold:</td><td>Not determined.</td></tr></table> pH-value: Not applicable.		Form:	Powder	Color:	Yellow	Odor:	Not determined	Odor threshold:	Not determined.		
Form:	Powder										
Color:	Yellow										
Odor:	Not determined										
Odor threshold:	Not determined.										
Change in condition <table><tr><td>Melting point/Melting range:</td><td>Not determined</td></tr><tr><td>Boiling point/Boiling range:</td><td>Not determined</td></tr><tr><td>Sublimation temperature / start:</td><td>Not determined</td></tr></table> Flammability (solid, gaseous) Contact with combustible material may cause fire. Ignition temperature: Not determined Decomposition temperature: Not determined Auto igniting: Not determined.		Melting point/Melting range:	Not determined	Boiling point/Boiling range:	Not determined	Sublimation temperature / start:	Not determined				
Melting point/Melting range:	Not determined										
Boiling point/Boiling range:	Not determined										
Sublimation temperature / start:	Not determined										
Danger of explosion: Not determined. Explosion limits: <table><tr><td>Lower:</td><td>Not determined</td></tr><tr><td>Upper:</td><td>Not determined</td></tr></table> Vapor pressure: Not applicable. Density: Not determined Relative density Not determined. Vapor density Not applicable. Evaporation rate Not applicable. Solubility in / Miscibility with <table><tr><td>Water at 20 °C (68 °F):</td><td>163 g/l</td></tr></table> Partition coefficient (n-octanol/water): Not determined. Viscosity: <table><tr><td>dynamic:</td><td>Not applicable.</td></tr><tr><td>kinematic:</td><td>Not applicable.</td></tr></table> Other information No further relevant information available.		Lower:	Not determined	Upper:	Not determined	Water at 20 °C (68 °F):	163 g/l	dynamic:	Not applicable.	kinematic:	Not applicable.
Lower:	Not determined										
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Water at 20 °C (68 °F):	163 g/l										
dynamic:	Not applicable.										
kinematic:	Not applicable.										

10 Stability and reactivity	
Reactivity May intensify fire; oxidizer. Chemical stability Stable under recommended storage conditions. Thermal decomposition / conditions to be avoided: Decomposition will not occur if used and stored according to specifications. Possibility of hazardous reactions Reacts with strong oxidizing agents Reacts with reducing agents Reacts with flammable substances Conditions to avoid No further relevant information available. Incompatible materials: Flammable substances Reducing agents Oxidizing agents Organic materials Metal powders Hazardous decomposition products: Calcium oxide Chromium oxides	

11 Toxicological information	
Information on toxicological effects Acute toxicity: Harmful if swallowed. The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.	
LD/LC50 values that are relevant for classification:	
Oral LD50 327 mg/kg (rat)	
Skin irritation or corrosion: May cause irritation Eye irritation or corrosion: May cause irritation Sensitization: No sensitizing effects known. Germ cell mutagenicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for this substance. Carcinogenicity: May cause cancer. IARC-1: Carcinogenic to humans: sufficient evidence of carcinogenicity.	

(Contd. on page 4)

Product name: Calcium chromate	
<div>(Contd. of page 3)</div> <p>ACGIH A2: Suspected human carcinogen: Agent is carcinogenic in experimental animals at dose levels, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) considered relevant to worker exposure. Available epidemiologic studies are conflicting or insufficient to confirm an increased risk of cancer in exposed humans. The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for this substance. Reproductive toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for this substance. Specific target organ system toxicity - repeated exposure: No effects known. Specific target organ system toxicity - single exposure: No effects known. Aspiration hazard: No effects known. Subacute to chronic toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for this substance. Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.</p>	
12 Ecological information	
<p>Toxicity Aquatic toxicity: No further relevant information available. Persistence and degradability No further relevant information available. Bioaccumulative potential No further relevant information available. Mobility in soil No further relevant information available. Ecotoxicological effects: Remark: Very toxic for aquatic organisms Additional ecological information: General notes: Do not allow product to reach ground water, water course or sewage system, even in small quantities. Danger to drinking water if even extremely small quantities leak into the ground. Also poisonous for fish and plankton in water bodies. May cause long lasting harmful effects to aquatic life. Avoid transfer into the environment. Very toxic for aquatic organisms Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable. Other adverse effects No further relevant information available.</p>	
13 Disposal considerations	
<p>Waste treatment methods Recommendation Consult state, local or national regulations to ensure proper disposal. Uncleaned packagings: Recommendation: Disposal must be made according to official regulations.</p>	
14 Transport information	
UN-Number DOT, IMDG, IATA	UN3087
UN proper shipping name DOT IMDG, IATA	Oxidizing solid, toxic, n.o.s. (Calcium chromate) OXIDIZING SOLID, TOXIC, N.O.S. (Calcium chromate)
Transport hazard class(es) DOT	
Class Label Class Label IMDG, IATA	5.1 Oxidising substances. 5.1+6.1 5.1 (OT2) Oxidizing substances 5.1+6.1
Class Label	5.1 Oxidising substances. 5.1+6.1
Packing group DOT, IMDG, IATA	III
Environmental hazards:	Environmentally hazardous substance, solid
Special precautions for user EMS Number:	Warning: Oxidizing substances F-A,S-Q
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	
DOT Marine Pollutant (DOT):	No
UN "Model Regulation":	UN3087, Oxidizing solid, toxic, n.o.s. (Calcium chromate), 5.1 (6.1), III
15 Regulatory information	
<p>Safety, health and environmental regulations/legislation specific for the substance or mixture GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS) Hazard pictograms</p>	
GHS03 GHS07 GHS08	
Signal word Danger Hazard statements H272 May intensify fire; oxidizer.	

Product name: Calcium chromate	
<div>H302 Harmful if swallowed. H350 May cause cancer. Precautionary statements P221 Take any precaution to avoid mixing with combustibles. P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P220 Keep/Store away from clothing/combustible materials. P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor/.../if you feel unwell. P405 Store locked up. P501 Dispose of contents/container in accordance with local/regional/national/international regulations. National regulations All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory. All components of this product are listed on the Canadian Domestic Substances List (DSL).</div> <div>(Contd. of page 4)</div>	
SARA Section 313 (specific toxic chemical listings)	
13765-19-0	Calcium chromate
California Proposition 65	
Prop 65 - Chemicals known to cause cancer	
13765-19-0	Calcium chromate
Prop 65 - Developmental toxicity Substance is not listed.	
Prop 65 - Developmental toxicity, female	
13765-19-0	Calcium chromate
Prop 65 - Developmental toxicity, male	
13765-19-0	Calcium chromate
Information about limitation of use: Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases. For use only by technically qualified individuals. This product is subject to the reporting requirements of section 313 of the Emergency Planning and Community Right to Know Act of 1986 and 40CFR372. Other regulations, limitations and prohibitive regulations Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006. Substance is not listed. The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed. Substance is not listed. Annex XIV of the REACH Regulations (requiring Authorisation for use) Substance is not listed. Chemical safety assessment: A Chemical Safety Assessment has not been carried out.	
16 Other information Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user. Department issuing SDS: Global Marketing Department Date of preparation / last revision 11/24/2015 / - Abbreviations and acronyms: ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) HMIS: Hazardous Materials Identification System (USA) WHMIS: Workplace Hazardous Materials Information System (Canada) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent vPvB: very Persistent and very Bioaccumulative ACGIH: American Conference of Governmental Industrial Hygienists (USA) OSHA: Occupational Safety and Health Administration (USA) NTP: National Toxicology Program (USA) IARC: International Agency for Research on Cancer EPA: Environmental Protection Agency (USA)	