



Post Apple Scientific, inc  
8893 Gulf Rd  
North East, PA 16428

## SAFETY DATA SHEET

Creation Date 24-Nov-2010

Revision Date 10-Apr-2014

Revision Number 1

### 1. Identification

**Product Name** Chromium trioxide  
**Cat No. :** C2980  
**Synonyms** Chromium trioxide; Chromic acid; Chromic anhydride  
**Recommended Use** Laboratory chemicals  
**Uses advised against** No Information available

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

##### **Company**

Post Apple Scientific, inc.  
8893 Gulf Rd  
North East, PA 16428  
Tel: 814-725-3330

##### **Emergency Telephone Number**

CHEMTREC®, Inside the USA: 800- 424-9300  
CHEMTREC®, Outside the USA: 001- 703-527-3887

### 2. Hazard(s) Identification

#### **Classification**

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

Oxidizing solids	Category 1
Acute oral toxicity	Category 3
Acute dermal toxicity	Category 2
Acute Inhalation Toxicity - Dusts and Mists	Category 2
Skin Corrosion/Irritation	Category 1 A
Serious Eye Damage/Eye Irritation	Category 1
Respiratory Sensitization	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.	

#### **Label Elements**

##### **Signal Word**

Danger

**Hazard Statements**

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

**Precautionary Statements****Prevention**

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/fume/gas/mist/vapors/spray  
In case of inadequate ventilation wear respiratory protection  
Contaminated work clothing should not be allowed out of the workplace  
Wear protective gloves  
Use only outdoors or in a well-ventilated area  
Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
Keep/Store away from clothing/ other combustible materials  
Take any precaution to avoid mixing with combustibles  
Wear fire/flame resistant/retardant clothing

**Response**

Immediately call a POISON CENTER or doctor/physician

**Inhalation**

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

**Skin**

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 clothes  
Rinse skin with water/shower

**Eyes**

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

**Ingestion**

Rinse mouth  
Do NOT induce vomiting

**Fire**

In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion  
In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction

**Storage**

Store locked up

Store in a well-ventilated place. Keep container tightly closed

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

Very toxic to aquatic life with long lasting effects

### 3. Composition / information on ingredients

**Haz/Non-haz**

Component	CAS-No	Weight %
Chromium trioxide (CrO3)	1333-82-0	>95

### 4. First-aid measures

**Eye Contact**

Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

**Skin Contact**

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

**Inhalation**

Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Immediate medical attention is required.

**Ingestion**

Do not induce vomiting. Call a physician or Poison Control Center immediately.

**Most important symptoms/effects**

Causes burns by all exposure routes. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause allergic skin reaction.. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. 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.

**Notes to Physician**

Treat symptomatically.

### 5. Fire-fighting measures

**Suitable Extinguishing Media**

Substance is nonflammable; use agent most appropriate to extinguish surrounding fire..

**Unsuitable Extinguishing Media**

No information available.

**Flash Point  
Method -**

No information available.

No information 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

**Specific Hazards Arising from the Chemical**

Oxidizer: Contact with combustible/organic material may cause fire. Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes. Containers may explode when heated.

**Hazardous Combustion Products** Carbon dioxide (CO<sub>2</sub>), Highly toxic fumes.

**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.

**NFPA**

**Health**  
4

**Flammability**  
0

**Instability**  
1

**Physical hazards**  
OX

## 6. Accidental release measures

**Personal Precautions** Use personal protective equipment. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Do not get in eyes, on skin, or on clothing.

**Environmental Precautions** See Section 12 for additional ecological information. Avoid release to the environment. Collect spillage.

**Methods for Containment and Clean Up** Keep combustibles (wood, paper, oil, etc) away from spilled material. Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

## 7. Handling and storage

**Handling** Wear personal protective equipment. Use only under a chemical fume hood. Avoid dust formation. Keep away from clothing and other combustible materials. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Do not ingest.

**Storage** Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Do not store near combustible materials.

## 8. Exposure controls / personal protection

**Exposure Guidelines**

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Chromium trioxide (CrO <sub>3</sub> )	TWA: 0.05 mg/m <sup>3</sup>	(Vacated) Ceiling: 0.1 mg/m <sup>3</sup>	IDLH: 15 mg/m <sup>3</sup> TWA: 0.0002 mg/m <sup>3</sup>

Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
Chromium trioxide (CrO <sub>3</sub> )	TWA: 0.05 mg/m <sup>3</sup>	TWA: 0.5 mg/m <sup>3</sup> TWA: 0.05 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup>

**Legend**

**ACGIH** - American Conference of Governmental Industrial Hygienists

**OSHA** - Occupational Safety and Health Administration

**NIOSH IDLH**: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

**Engineering Measures** 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 regulations in 29 CFR 1910.133 or European Standard EN166

**Skin and body protection** Wear appropriate protective gloves and clothing to prevent skin exposure.

<b>Respiratory Protection</b>	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.
<b>Hygiene Measures</b>	Handle in accordance with good industrial hygiene and safety practice

## 9. Physical and chemical properties

<b>Physical State</b>	Solid
<b>Appearance</b>	Reddish-violet
<b>Odor</b>	Odorless
<b>Odor Threshold</b>	No information available.
<b>pH</b>	1 50g/l aq.sol.
<b>Melting Point/Range</b>	196°C / 384.8°F
<b>Boiling Point/Range</b>	No information available.
<b>Flash Point</b>	No information available.
<b>Evaporation Rate</b>	No information available.
<b>Flammability (solid,gas)</b>	No information available
<b>Flammability or explosive limits</b>	
<b>Upper</b>	No data available
<b>Lower</b>	No data available
<b>Vapor Pressure</b>	No information available.
<b>Vapor Density</b>	3.4
<b>Relative Density</b>	2.700
<b>Solubility</b>	No information available.
<b>Partition coefficient; n-octanol/water</b>	No data available
<b>Autoignition Temperature</b>	No information available.
<b>Decomposition temperature</b>	198 °C
<b>Viscosity</b>	No information available.
<b>Molecular Formula</b>	Cr O3
<b>Molecular Weight</b>	99.99

## 10. Stability and reactivity

<b>Reactive Hazard</b>	No
<b>Stability</b>	Oxidizer: Contact with combustible/organic material may cause fire. Hygroscopic.
<b>Conditions to Avoid</b>	Excess heat. Incompatible products. Exposure to moist air or water. Combustible material.
<b>Incompatible Materials</b>	Bases, Alcohols, Amines, Ammonia, Hydrocarbons, Ketones, Acetone, Acid anhydrides, Metals, Reducing agents, Powdered metals
<b>Hazardous Decomposition Products</b>	Carbon dioxide (CO <sub>2</sub> ), Highly toxic fumes
<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur.
<b>Hazardous Reactions</b>	None under normal processing

## 11. Toxicological information

### Acute Toxicity

#### Product Information

#### Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Chromium trioxide (CrO <sub>3</sub> )	50 mg/kg ( Rat )	55 mg/kg ( Rabbit )	0.217 mg/L ( Rat ) 4 h

**Toxicologically Synergistic Products** No information available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Irritation** Causes severe burns by all exposure routes

**Sensitization** May cause sensitization by inhalation and skin contact

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Chromium trioxide (CrO <sub>3</sub> )	1333-82-0	Group 1	Known	A1	X	A1

**Mutagenic Effects** Mutagenic Ames test: positive.

**Reproductive Effects** Possible risk of impaired fertility.

**Developmental Effects** No information available.

**Teratogenicity** Teratogenic effects have occurred in experimental animals..

**STOT - single exposure** Respiratory system.

**STOT - repeated exposure** Liver, Kidney, Blood.

**Aspiration hazard** No information available.

**Symptoms / effects, both acute and delayed** Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. 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.

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** See actual entry in RTECS for complete information.

## 12. Ecological information

### Ecotoxicity

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Do not empty into drains.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Chromium trioxide (CrO <sub>3</sub> )	Not listed	40 mg/L LC50 96 h	Not listed	Not listed

**Persistence and Degradability** No information available.

**Bioaccumulation/ Accumulation** No information available

**Mobility** No information available

## 13. Disposal considerations

**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

## 14. Transport information

### DOT

**UN-No** UN1463  
**Proper Shipping Name** CHROMIUM TRIOXIDE, ANHYDROUS  
**Hazard Class** 5.1  
**Subsidiary Hazard Class** 8; 6.1  
**Packing Group** II

### TDG

**UN-No** UN1463  
**Proper Shipping Name** CHROMIUM TRIOXIDE, ANHYDROUS  
**Hazard Class** 5.1  
**Subsidiary Hazard Class** 8; 6.1  
**Packing Group** II

### IATA

**UN-No** 1463  
**Proper Shipping Name** CHROMIUM TRIOXIDE, ANHYDROUS  
**Hazard Class** 5.1  
**Subsidiary Hazard Class** 6.1, 8  
**Packing Group** II

### IMDG/IMO

**UN-No** 1463  
**Proper Shipping Name** CHROMIUM TRIOXIDE, ANHYDROUS  
**Hazard Class** 5.1  
**Subsidiary Hazard Class** 6.1, 8  
**Packing Group** II

## 15. Regulatory information

### International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Chromium trioxide (CrO <sub>3</sub> )	X	X	-	215-607-8	-		X	X	X	X	X

#### Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

### U.S. Federal Regulations

#### TSCA 12(b)

Component	TSCA 12(b)
Chromium trioxide (CrO3)	Section 6

**SARA 313**

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Chromium trioxide (CrO3)	1333-82-0	>95	0.1

**SARA 311/312 Hazardous Categorization**

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

**Clean Water Act**

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Chromium trioxide (CrO3)	-	-	X	-

**Clean Air Act**

Component	HAPS Data	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Chromium trioxide (CrO3)	X		-

**OSHA Occupational Safety and Health Administration**

Not applicable

Component	Specifically Regulated Chemicals	Highly Hazardous Chemicals
Chromium trioxide (CrO3)	5 µg/m <sup>3</sup> TWA 2.5 µg/m <sup>3</sup> Action Level	-

**CERCLA**

Not Applicable

**California Proposition 65**

This product contains the following Proposition 65 chemicals:

Component	CAS-No	California Prop. 65	Prop 65 NSRL
Chromium trioxide (CrO3)	1333-82-0	Carcinogen Developmental Female Reproductive Male Reproductive	0.001 µg/day

**State Right-to-Know**

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Chromium trioxide (CrO3)	X	X	X	X	X

**U.S. Department of Transportation**

Reportable Quantity (RQ):	N
DOT Marine Pollutant	N
DOT Severe Marine Pollutant	N

**U.S. Department of Homeland Security**

This product does not contain any DHS chemicals.



Other International Regulations

Mexico - Grade No information available

**Canada**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class C Oxidizing materials  
D1A Very toxic materials  
D2A Very toxic materials  
E Corrosive material

**16. Other information**

Prepared By Regulatory Affairs  
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Creation Date 24-Nov-2010

Revision Date 10-Apr-2014

Print Date 10-Apr-2014

Revision Summary This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

**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.

**End of SDS**