Section 1. Product and Company Identification

Product Name: Chromic Acid Flake

Parchem - fine & specialty chemicals
415 Huguenot Street
New Rochelle, NY 10801
(914) 654-6800  (914) 654-6899
parchem.com  info@parchem.com

EMERGENCY RESPONSE NUMBER
CHEMTEL
Toll Free US & Canada: 1 (800) 255-3924
All other Origins: 1 (813) 248-0585
Collect Calls Accepted

Section 2. Hazards Identification

Classification of the substance or mixture
OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral Category 3
Acute toxicity - Dermal Category 3
Acute toxicity - Inhalation (Dusts/Mists) Category 2
Skin corrosion/irritation Category 1 Sub-category A
Serious eye damage/eye irritation Category 1
Respiratory sensitization Category 1
Skin sensitization Category 1
Germ cell mutagenicity Category 2
Carcinogenicity Category 1A
Reproductive toxicity Category 2
Specific target organ toxicity (single exposure) Category 3
Specific target organ toxicity (repeated exposure) Category 1
Oxidizing solids Category 1

GHS Label Elements
Pictograms:

Signal word: DANGER

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

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 breathe dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated 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

Precautionary Statements - Response
Immediately call a POISON CENTER or doctor/physician
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISON CENTER or doctor/physician
Call a POISON CENTER or doctor/physician if you feel unwell
Wash contaminated clothing before reuse
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
If skin irritation or rash occurs: Get medical advice/attention
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Immediately call a POISON CENTER or doctor/physician
Call a POISON CENTER or doctor/physician if you feel unwell
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Rinse mouth
Do NOT induce vomiting

Precautionary Statements - Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal
Dispose of contents/container to an approved landfill
Hazards not otherwise classified (HNOC)
Other hazards
Very toxic to aquatic life with long lasting effects
Harmful to aquatic life

Section 3. Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Chromic Acid Flake</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMPONENT</td>
<td>CAS NUMBER</td>
</tr>
<tr>
<td>Chromium Trioxide</td>
<td>1333-82-0</td>
</tr>
</tbody>
</table>

Section 4. First Aid Measures

First-aid measures

General advice: Immediate medical attention is required.
Eye contact: Keep eye wide open while rinsing. Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Do not rub affected area.
Inhalation: Remove to fresh air. Call a physician or poison control center immediately. Oxygen or artificial respiration if needed. Call a physician. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
Skin Contact: Immediate medical attention is required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Ingestion: Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. Immediate medical attention is required. Remove from exposure, lie down. Clean mouth with water and drink afterwards plenty of water. Call a physician or poison control center immediately.
Self-protection of the first-aider: Use personal protective equipment as required. Avoid contact with skin, eyes, or clothing.

Most important symptoms and effects, both acute and delayed

Symptoms: No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. Treat symptomatically.
Section 5. Firefighting Measures

**Extinguishing media**

**Suitable extinguishing media:** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media:** Caution: Use of water spray when fighting fire may be inefficient.

**Specific hazards arising from the chemical:** The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating and toxic gases and vapors. In the event of fire and/or explosion do not breathe fumes.

**Explosion data**

- **Sensitivity to Mechanical Impact:** None.
- **Sensitivity to Static Discharge:** None.

**Protective equipment and precautions for firefighters:** Wear self-contained breathing apparatus and protective suit.

Section 6. Accidental Release Measures

**Personal precautions, protective equipment, and emergency procedures**

**Personal precautions:** Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing. Keep people away from and upwind of spill/leak.

**For emergency responders:** Use personal protection recommended in Section 8. Use personal protective equipment as required.

**Environmental Precautions:** Do not allow into any sewer, on the ground or into any body of water. Should not be released into the environment. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. See Section 12 for additional ecological information.

**Methods and material for containment and cleaning up**

- **Methods for containment:** Prevent further leakage or spillage if safe to do so. Cover powder spill with plastic sheet or tarp to minimize spreading. Dike far ahead of liquid spill for later disposal.
- **Methods for cleaning up:** Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly. Use personal protective equipment as required. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Avoid creating dust. Soak up with inert absorbent material. Dam up. After cleaning, flush away traces with water.

Section 7. Handling and Storage

**Precautions for safe handling**

**Advice on safe handling:** Avoid contact with skin, eyes, or clothing. Use personal protective equipment as required. Ensure adequate ventilation, especially in confined areas. In case of
insufficient ventilation, wear suitable respiratory equipment. Use only with adequate ventilation and in closed systems.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions:** Keep out of the reach of children. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.

**Incompatible materials:** Incompatible with strong acids and bases. Incompatible with oxidizing agents.

### Section 8. Exposure Controls / Personal Protection

#### Control Parameters

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chromium trioxide</td>
<td>1333-82-0</td>
<td>TWA: 0.05 mg/m3 Cr</td>
<td>TWA: 5 μg/m3 (vacated) Ceiling: 0.1 mg/m3 Ceiling: 0.1 mg/m3 CrO3 applies to any operations or sectors for which the Hexavalent Chromium standard [29 CFR 1910.1026] is stayed or is otherwise not in effect</td>
<td>IDLH: 15 mg/m3 Cr(VI) TWA: 0.0002 mg/m3 Cr</td>
</tr>
</tbody>
</table>

NIOSH IDLH Immediately Dangerous to Life or Health

**Other Information:** Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

**Appropriate engineering controls**

**Engineering Controls:** Showers; Eyewash stations; Ventilation systems

**Individual protection measures, such as personal protective equipment**

**General Hygiene Considerations:** When using do not eat, drink, or smoke. Wash contaminated clothing before reuse. Keep away from food, drink and animal feeding stuffs. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Take off all contaminated clothing and wash it before reuse. Wear suitable gloves and eye/face protection.

**Eye/face protection:** Tight sealing safety goggles. Face protection shield.

**Skin and body protection:** No special technical protective measures are necessary.

**Respiratory protection:** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA-approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
Section 9. Physical and Chemical Properties

**Appearance:** Solid flakes  
**Color:** Red, violet  
**Odor:** No information available  
**Odor Threshold:** No information available  
**pH:** No information available  
**Melting Point/Freezing Point:** 385 °F  
**Boiling point/boiling range:** No information available  
**Flash point:** No information available  
**Evaporation rate:** No information available  
**Flammability (solid, gas):** No information available  

**Flammability Limit in Air**  
**Upper flammability limit:** No information available  
**Lower flammability limit:** No information available  

**Vapor pressure:** No information available  
**Vapor density:** No information available  
**Specific Gravity:** 2.7  
**Water Solubility:** Partially soluble  
**Solubility in other solvents:** No information available  
**Partition coefficient:** No information available  
**Autoignition temperature:** No information available  
**Decomposition temperature:** 250°C  
**Kinematic viscosity:** No information available  
**Dynamic viscosity:** No information available  
**Explosive properties:** No information available  
**Oxidizing properties:** No information available  

**Other Information**  
**Softening point:** No information available  
**Molecular weight:** No information available  
**VOC Content (%):** No information available  
**Density:** No information available  
**Bulk density:** No information available  
**Percent Volatile:** No information available  

Section 10. Stability and Reactivity

**Reactivity:** No data available  
**Chemical stability:** Stable under recommended storage conditions.  
**Possibility of Hazardous Reactions:** None under normal processing.
Conditions to avoid: Exposure to air or moisture over prolonged periods.

Incompatible materials: Incompatible with strong acids and bases. Incompatible with oxidizing agents.

Hazardous Decomposition Products: Thermal decomposition can lead to release of irritating and toxic gases and vapors.

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Section 11. Toxicological Information

Information on likely routes of exposure

Product Information: No data available

Inhalation: No data available.

Eye contact: No data available.

Skin Contact: No data available.

Ingestion: No data available.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chromium trioxide</td>
<td>1333-82-0</td>
<td>= 50 mg/kg (Rat)</td>
<td>= 55 mg/kg (Rabbit)</td>
<td>= 0.217 mg/L (Rat) 4 h</td>
</tr>
</tbody>
</table>

Information on toxicological effects

Symptoms: No information available.

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

Sensitization: No information available.

Germ cell Mutagenicity: No information available.

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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chromium trioxide</td>
<td>1333-82-0</td>
<td>A1</td>
<td>Group 1</td>
<td>Known</td>
<td>X</td>
</tr>
</tbody>
</table>

ACGIH (American Conference of Governmental Industrial Hygienists)

A1 - Known Human Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present
Reproductive toxicity: No information available.

STOT - single exposure: No information available.

STOT - repeated exposure: No information available.

Chronic toxicity: Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. Avoid repeated exposure. Possible risk of irreversible effects. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: blood, Eyes, kidney, liver, lungs, Respiratory system, Skin.

Aspiration hazard: No information available.

Numerical measures of toxicity - Product Information
The following values are calculated based on chapter 3.1 of the GHS document
ATEmix (oral): 100 mg/kg
ATEmix (dermal): 300 mg/kg
ATEmix (inhalation-dust/mist): 0 mg/L 50

Section 12. Ecological Information

Ecotoxicity: Very toxic to aquatic life with long lasting effects

0% of the mixture consists of component(s) of unknown hazards to the aquatic environment

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chromium trioxide</td>
<td>1333-82-0</td>
<td>-</td>
<td>40: 96 h Colisa fasciatus mg/L LC50 static</td>
<td>-</td>
</tr>
</tbody>
</table>

Persistence and degradability: No information available.
Bioaccumulation: No information available.
Mobility: No information available.

Other adverse effects: No information available

Section 13. Disposal Considerations

Waste Treatment Methods: Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.
Section 14. Transport Information

**Note:** Store in a closed container. Keep container upright.

**DOT**
- **UN/ID no:** UN1463
- **Proper shipping name:** Chromium trioxide, anhydrous
- **Hazard Class:** 5.1
- **Subsidiary class:** 6.1 8
- **Packing Group:** II
- **Special Provisions:** IB8, IP2, IP4, T3, TP33
- **Description:** UN1463, Chromium trioxide, anhydrous, 5.1 (6.1, 8), II
- **Emergency Response Guide Number:** 141

**IATA**
- **UN/ID no:** UN1463
- **Proper shipping name:** Chromium trioxide, anhydrous
- **Hazard Class:** 5.1
- **Subsidiary hazard class:** 6.1 8
- **Packing Group:** II
- **ERG Code:** 5CP
- **Description:** UN1463, Chromium trioxide, anhydrous, 5.1 (6.1, 8), II

**IMDG**
- **UN/ID no:** UN1463
- **Proper shipping name:** Chromium trioxide, anhydrous
- **Hazard Class:** 5.1
- **Subsidiary hazard class:** 6.1, 8
- **Packing Group:** II
- **EmS-No:** F-A, S-Q
- **Description:** UN1463, Chromium trioxide, anhydrous, 5.1 (6.1 8), II

Section 15. Regulatory Information

**International Inventories**
- **TSCA:** Complies
- **DSL/NDSL:** Complies
- **EINECS/ELINCS:** Complies
- **ENCS:** Complies
- **IECSC:** Complies
- **KECL:** Complies
- **PICCS:** Complies
- **AICS:** Complies
Legend
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations
SARA 313: Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chromium trioxide</td>
<td>1333-82-0</td>
<td>0.1</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazard Categories
Acute health hazard Yes
Chronic Health Hazard Yes
Fire hazard No
Sudden release of pressure hazard No
Reactive Hazard No

CWA (Clean Water Act): This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chromium trioxide</td>
<td>1333-82-0</td>
<td>·</td>
<td>X</td>
<td>·</td>
<td>·</td>
</tr>
</tbody>
</table>

CERCLA: This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

FIFRA: Not applicable
US State Regulations

California Proposition 65: This product contains the following Proposition 65 chemicals

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>California Proposition 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chromium trioxide</td>
<td>1333-82-0</td>
<td>Carcinogen Developmental Female</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reproductive Male Reproductive</td>
</tr>
</tbody>
</table>

U.S. State Right-to-Know Regulations: No information available

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chromium trioxide</td>
<td>1333-82-0</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Canada: No information available

WHMIS Hazard Class: D1A - Very toxic materials D2A - Very toxic materials Non-controlled

HMIS Rating
- Health: 3*
- Flammability: 0
- Reactivity: 0
- Personal Protection: X

NFPA Rating
- Health: 3
- Flammability: 0
- Reactivity: 0

Physical and Chemical Properties: OX

Section 16. Other Information

Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

REVISION DATE: 2/7/2017