

Section 1: Identification

- **Product Name:** Chromium Trioxide and Calcium Sulfate Mixture
- **Synonyms:** Chromic Anhydride and Gypsum Mixture
- **Product Code:** PACE-CrO₃
- **Manufacturer:**
PACE Technologies
3601 E. 34th St.
Tucson, AZ 85713
+1-520-882-6598
- **Emergency Phone Number:**
CHEMTREC 800-424-9300 (US) Day or night
Customer No. 16568

Section 2: Hazard Identification

Classification of the Substance or Mixture

- **GHS Classification:**
 - **Chromium Trioxide:**
 - Oxidizing Solid: Category 1
 - Acute Toxicity (Oral): Category 3
 - Skin Corrosion/Irritation: Category 1A
 - Serious Eye Damage/Irritation: Category 1
 - Carcinogenicity: Category 1A
 - Specific Target Organ Toxicity (Single Exposure): Category 1
 - **Calcium Sulfate:**
 - Not classified as hazardous under GHS

Label Elements

- **Pictograms:**



- **Signal Word:** Danger

- **Hazard Statements:**

- **Chromium Trioxide:**

- H271: May cause fire or explosion; strong oxidizer.
 - H301: Toxic if swallowed.
 - H314: Causes severe skin burns and eye damage.
 - H350: May cause cancer.
 - H370: Causes damage to organs.

- **Calcium Sulfate:** Not hazardous in this mixture.

- **Water:** Not hazardous in this mixture.

- **Precautionary Statements:**

- P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
 - P220: Keep/store away from clothing/combustible materials.
 - P260: Do not breathe dust/fume/gas/mist/vapors/spray.
 - P280: Wear protective gloves/protective clothing/eye protection/face protection.
 - P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
 - P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

- **Storage:**

- P401 – Store in accordance with local, regional, national, and/or international regulations.

- Disposal:
 - P501 – Dispose of contents/container in accordance with Federal, State and Local Regulations.

Section 3: Composition/Information on Ingredients

Substance	CAS Number	Concentration (% w/w)
Chromium Trioxide	1333-82-0	0.5-2%
Calcium Sulfate (Gypsum)	7778-18-9	0.5-2%
Water	7732-18-5	96-99%

Section 4: First-Aid Measures

- **Inhalation:** Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Seek immediate medical attention.
- **Skin Contact:** Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Seek medical attention.
- **Eye Contact:** Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Seek medical attention immediately.
- **Ingestion:** Do NOT induce vomiting. Rinse mouth with water. Seek immediate medical attention.

Section 5: Fire-Fighting Measures

- **Suitable Extinguishing Media:** Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide. Do not use dry combustible materials near the fire.
- **Special Hazards Arising from the Substance or Mixture:** Chromium Trioxide is a strong oxidizer and can intensify fires. Can decompose at high temperatures to produce toxic and corrosive fumes, including chromium oxides. The presence of water may contribute to the generation of corrosive and toxic fumes if the mixture is heated.
- **Protective Equipment for Firefighters:** Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Section 6: Accidental Release Measures

- **Personal Precautions:** Evacuate personnel to safe areas. Ensure adequate ventilation. Use personal protective equipment. Avoid dust formation.

- **Environmental Precautions:** Prevent further leakage or spillage if safe to do so. Do not let the product enter drains.
- **Methods for Containment and Cleanup:** Sweep up and shovel. Keep in suitable, closed containers for disposal. Avoid using water to wash away residues.

Section 7: Handling and Storage

- **Precautions for Safe Handling:** Avoid contact with skin, eyes, and clothing. Do not breathe dust, vapors, or mist. Use only in well-ventilated areas. Keep away from sources of ignition. Prevent the buildup of dust.
- **Conditions for Safe Storage:** Store in a cool, dry, and well-ventilated area away from incompatible substances. Keep container tightly closed in a dry and well-ventilated place. Separate from combustible materials. Ensure that containers are tightly closed to avoid the release of fumes.

Section 8: Exposure Controls/Personal Protection

Control Parameters

- **Chromium Trioxide:**
 - OSHA PEL: 0.005 mg/m³ as Cr(VI)
 - ACGIH TLV: 0.05 mg/m³ as Cr(VI)

Personal Protective Equipment (PPE)

- **Respiratory Protection:** If the exposure limit is exceeded, use a full-face, air-purifying respirator with high-efficiency particulate air (HEPA) filters.
- **Skin Protection:** Wear chemical-resistant gloves and protective clothing.
- **Eye Protection:** Use chemical safety goggles and/or a full-face shield.
- **Engineering Controls:** Provide adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.

Section 9: Physical and Chemical Properties

- **Appearance:** Dark red, crystalline mixture with white powder, wet or in solution form.
- **Odor:** Odorless
- **Odor Threshold:** Not applicable
- **pH:** Acidic (when in solution)

- **Melting Point/Freezing Point:** Chromium Trioxide: 196 °C; Calcium Sulfate: 1450 °C (decomposes); Water: 0 °C
- **Boiling Point:** Chromium Trioxide: Decomposes; Calcium Sulfate: Not applicable; Water: 100 °C
- **Flash Point:** Not applicable
- **Evaporation Rate:** Not applicable
- **Flammability:** Non-flammable
- **Upper/Lower Flammability or Explosive Limits:** Not applicable
- **Vapor Pressure:** Not applicable
- **Vapor Density:** Not applicable
- **Relative Density:** Not applicable
- **Solubility:** Chromium Trioxide: Soluble in water; Calcium Sulfate: Slightly soluble in water; Water: Completely soluble
- **Partition Coefficient (n-octanol/water):** Not applicable
- **Auto-ignition Temperature:** Not applicable
- **Decomposition Temperature:** Not applicable
- **Viscosity:** Not applicable

Section 10: Stability and Reactivity

- **Reactivity:** Chromium Trioxide is a strong oxidizer and reacts violently with organic materials, reducing agents, and combustible materials. Water may facilitate these reactions.
- **Chemical Stability:** Stable under recommended storage conditions.
- **Possibility of Hazardous Reactions:** Contact with organic materials, strong reducing agents, and bases may cause a violent reaction or explosion. The presence of water may lead to the generation of corrosive and toxic fumes.
- **Conditions to Avoid:** Heat, flames, sparks, and other sources of ignition. Avoid contact with incompatible materials.
- **Incompatible Materials:** Organic materials, strong reducing agents, and bases.
- **Hazardous Decomposition Products:** Chromium oxides, sulfur oxides, and potentially hydrogen gas in the presence of certain metals.

Section 11: Toxicological Information

- **Acute Toxicity:** Toxic if swallowed, inhaled, or absorbed through the skin (Chromium Trioxide).
- **Skin Corrosion/Irritation:** Causes severe burns (Chromium Trioxide).
- **Serious Eye Damage/Irritation:** Causes severe eye damage (Chromium Trioxide).
- **Respiratory or Skin Sensitization:** Chromium Trioxide can cause respiratory sensitization.
- **Carcinogenicity:** Chromium Trioxide is a known human carcinogen (IARC Group 1).
- **Reproductive Toxicity:** Not classified.
- **Specific Target Organ Toxicity (Single Exposure):** Causes damage to organs (Chromium Trioxide).
- **Specific Target Organ Toxicity (Repeated Exposure):** May cause damage to organs through prolonged or repeated exposure (Chromium Trioxide).
- **Aspiration Hazard:** Not applicable.

Section 12: Ecological Information

- **Ecotoxicity:** Chromium Trioxide is highly toxic to aquatic life with long-lasting effects. The presence of water may increase the mobility of Chromium Trioxide in the environment.
- **Persistence and Degradability:** Chromium Trioxide does not degrade in the environment.
- **Bioaccumulative Potential:** Chromium can accumulate in aquatic organisms.
- **Mobility in Soil:** Chromium Trioxide is highly mobile in soil.
- **Other Adverse Effects:** No additional information available.

Section 13: Disposal Considerations

- **Waste Disposal Methods:** Dispose of in accordance with local, regional, national, and international regulations. Do not dispose of into the environment. Neutralize and collect the mixture in appropriate containers.

Section 14: Transport Information

- **UN Number:** UN 1463

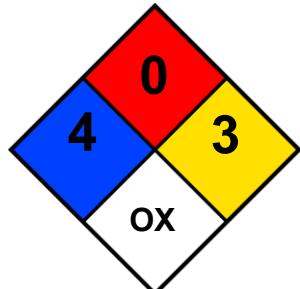
- **Proper Shipping Name:** Chromium Trioxide, Anhydrous
- **Hazard Class:** 5.1 (Oxidizer)
- **Packing Group:** III
- **Environmental Hazards:** Marine pollutant (Chromium Trioxide)
- **Special Precautions:** Handle with care. Ensure containers are tightly sealed and labeled correctly.

Section 15: Regulatory Information

- **OSHA:** This product is considered hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200).
- **SARA 313:** Chromium Trioxide is subject to reporting requirements under Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA).
- **TSCA:** All components of this product are listed on the TSCA Inventory.

Section 16: Other Information

16.1 NFPA 704



- **Health (4):** Indicates that the substance can cause serious or permanent injury.
- **Flammability (0):** Indicates that the material is not combustible.
- **Reactivity (3):** Indicates that the material may detonate or react explosively with exposure to shock, heat, or water under certain conditions.
- **Special Hazards (OX):** The material is an oxidizer.

Product Use:

Laboratory Reagent.

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