

# BBC Biochemical MATERIAL SAFETY DATA SHEET

## Section 1. Chemical Product and Company Information

<b>Common Name:</b> Chromium Trioxide	<b>Code:</b> RW0579
<b>Supplier:</b> BBC Biochemical	<b>MSDS#:</b> RW0579
<b>Synonym:</b> Chromium (VI) oxide (1:3); chromic acid, solid; chromic anhydride	<b>Validation Date:</b> 3-27-09
<b>Trade Name:</b> Not available	<b>Print Date:</b> 3-27-09
<b>Material Uses:</b> Not available	<b>Responsible Name:</b> Dr. B
<b>Manufacturer:</b> BBC Biochemical PO Box 1320 409 Eleanor Lane Mount Vernon, WA 98273 1-800-635-4477	<b>In Case of Emergency: 1-800-424-9300 Chemtrec USA 1-202-483-7616 Chemtrec Intrl 1-800-635-4477</b>

## Section 2. Composition and Information on Ingredients

Name	CAS#	% by Weight	Exposure Limits
1) Chromium (VI) Oxide	1333-82-0	99-100	OSHA PEL 0.1 mg/m <sup>2</sup> (ceiling) for CrO <sub>3</sub>

## Section 3. Hazards Identification

<b>Physical State and Appearance</b>	Dark red deliquescent solid.
<b>Emergency Overview</b>	Not available.
<b>Routes of Entry</b>	Eye contact, inhalation, ingestion, skin contact.
<b>Potential Acute Health Effects</b>	<p><b>Eyes</b> Corrosive. Contact can cause blurred vision, redness, pain and severe tissue burns. May cause corneal injury or blindness.</p> <p><b>Skin</b> Corrosive. Symptoms of redness, pain, and severe burn can occur. Dusts and strong solutions may cause severe irritation. Contact with broken skin may cause ulcers (chrome sores) and absorption, which may cause systemic poisoning, affecting kidney and liver functions. May cause skin sensitization.</p> <p><b>Inhalation</b> Corrosive. Extremely destructive to tissues of the mucous membranes and upper respiratory tract. May cause ulceration and perforation of the nasal septum. Symptoms may include sore throat, coughing, shortness of breath, and labored breathing. May produce pulmonary sensitization or allergic asthma. Higher exposures may cause pulmonary edema.</p> <p><b>Ingestion</b> Corrosive. Swallowing can cause severe burns of the mouth, throat, and stomach, leading to death. Can cause sore throat, vomiting, diarrhea. May cause violent gastroenteritis, peripheral vascular collapse, dizziness, intense thirst, muscle cramps, shock, coma, abnormal bleeding, fever, liver damage and acute renal failure.</p>
<b>Potential Chronic Health Effects</b>	Repeated or prolonged exposure can cause ulceration and perforation of the nasal septum, respiratory irritation, liver and kidney damage and ulceration of the skin. Ulcerations at first may be painless, but may penetrate to the bone producing "chrome holes." Known to be a human carcinogen.
<b>Medical Conditions Aggravated by Overexposure/Overexposure/Signs/Symptoms</b>	Persons with pre-existing skin disorders, asthma, allergies or known sensitization to chromic acid or chromates may be more susceptible to the effects of this material.

## Section 4. First Aid Measures

<b>Eye Contact</b>	Immediately flush eyes thoroughly with water for at least 15 minutes.
<b>Skin Contact</b>	Immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
<b>Inhalation</b>	Remove to fresh air, give artificial respiration if breathing has stopped.
<b>Ingestion</b>	Get immediate medical attention; if conscious, give water freely. Do NOT induce vomiting unless directed to do so by medical personnel.
<b>Notes to Physician</b>	Not available.

## Section 5. Fire Fighting Measures

<b>Flammability of the</b>	Not combustible, but substance is a strong oxidizer and its heat of reaction with reducing agents or
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<b>Product</b>	combustibles may cause ignition. Will ignite on contact with acetic acid and alcohol. Releases oxygen upon decomposition, increasing the fire hazard.
<b>Auto-ignition Temperature</b>	Not available.
<b>Flash Points</b>	Not available.
<b>Flammable Limits</b>	Not available.
<b>Products of Combustion</b>	Not available.
<b>Fire Hazards in Presence Of Various Substances</b>	None indicated.
<b>Explosion Hazards in Presence of Various Substances</b>	Contact with oxidizable substances may cause extremely violent combustion. Containers may explode when involved in a fire.
<b>Fire Fighting Media and Instructions</b>	Wear self-contained breathing apparatus. Use water, however, the decomposing material will form a hot viscous foam and caution should be exercised against the possibility of a steam explosion
<b>Protective Clothing (Fire)</b>	
<b>Special Remarks on Fire Hazards</b>	
<b>Special Remarks on Explosion Hazards</b>	

### Section 6. Accidental Release Measures

<b>Small Spill and Leak</b>	Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.
<b>Large Spill and Leak</b>	Same as above.

### Section 7, Handling and Storage

<b>Handling</b>	Keep in a tightly closed container. Protect from physical damage. Store in a cool, dry, ventilated area away from sources of heat, ignition sources, moisture and incompatibilities. Do not store on wooden floors. Wear special protective equipment (Sec. 8) for maintenance break-in or where exposures may exceed established exposure levels. Wash hands, face, forearms and neck when exiting restricted areas. Shower, dispose of outer clothing, change to clean garments at the end of the day. Avoid cross-contamination of street clothes. Wash hands before eating and do not eat, drink, or smoke in workplace. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product
<b>Storage</b>	Keep container closed.

### Section 8. Exposure Controls / Personal Protection

<b>Engineering Controls</b>	
<b>Personal Protection</b>	
<b>Eyes</b>	Safety glasses with side shields should be worn at all times.
<b>Body</b>	Impervious clothing should be worn to prevent skin contact.
<b>Respiratory</b>	Any dust or mist respirator. If workplace exposure limit(s) of product or any component is exceeded, a NIOSH/MSHA approved air respirator is advised in absence of proper environmental control. Material should be handled or transferred in an approved fume hood or with adequate ventilation.
<b>Hands</b>	Rubber or equivalent gloves should be worn to prevent skin contact.
<b>Feet</b>	Data not available.
<b>Personal Protection in Case of a Large Spill</b>	
Impervious clothing, rubber or equivalent gloves, safety glasses with side shields and respirator.	
<b>Product Name</b>	<b>Exposure Limits</b>
1) Chromium Trioxide	OSHA 0.1 mg/m <sup>3</sup> (Ceiling) as CrO <sub>3</sub>
2)	ACGIH 0.05 mg/m <sup>3</sup> (TWA) as Cr
3)	
<b>Consult Local authorities before acceptable exposure limits.</b>	

### Section 9. Physical and Chemical Properties

<b>Physical State and Appearance</b>	Dark red deliquescent solid.	<b>Odor:</b>	Odorless
<b>Molecular Weight</b>	99.99	<b>Taste:</b>	Not available.
<b>Molecular Formula</b>	CrO <sub>3</sub>	<b>Color:</b>	Dark red
<b>pH (1%/Water)</b>	Not applicable.		
<b>Boiling/Condensation Point</b>	Not applicable.		
<b>Melting/Freezing Point</b>	Not applicable.		

<b>Critical Temperature</b>	Not applicable.
<b>Specific Gravity</b>	Not applicable.
<b>Vapor Pressure</b>	Not applicable.
<b>Vapor Density</b>	Not applicable.
<b>Volatility</b>	Not applicable.
<b>Odor Threshold</b>	Not applicable.
<b>Evaporation Rate</b>	Not applicable.
<b>VOC</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Ionicity (in water)</b>	Not available.
<b>Dispersion Properties</b>	Not available.
<b>Solubility</b>	63 g/100g water @ 20C (68F)
<b>Physical Chemical Comments</b>	Not available.

### Section 10. Stability and Reactivity

<b>Stability and Reactivity</b>	Stable under ordinary conditions of use and storage.
<b>Conditions of Instability</b>	Avoid excess heat and contact with combustible or organic materials.
<b>Incompatibility with Various Substances</b>	Any combustible, organic or other readily oxidizable material (paper, wood, sulfur, aluminum or plastics). Incompatible with arsenic, ammonia gas, hydrogen sulfide, phosphorus potassium; sodium and selenium will produce incandescence. Corrosive to metals.
<b>Hazardous Decomposition Products</b>	Burning may produce chrome oxides.
<b>Hazardous Polymerization</b>	Does not occur.

### Section 11. Toxicological Information

<b>Toxicity to Animals</b>	Oral rat LD50: 80 mg/kg Investigated as a tumorigen, mutagen, reproductive effector.
<b>Chronic Effects on Humans</b>	
<b>Other Toxic Effects on Humans</b>	
<b>Special Remarks on Toxicity to Animals</b>	Not available.
<b>Special Remarks on Chronic Effects on Humans</b>	Not available.
<b>Special Remarks on Other Toxic Effects on Humans</b>	<b>WARNING:</b> THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

### Section 12. Ecological Information

<b>Ecotoxicity</b>	When released into the soil, this material may leach into groundwater. When released into water, this material is not expected to evaporate significantly. When released into the air, this material may be removed from the atmosphere to a moderate extent by wet deposition. This material is expected to be toxic to aquatic life.
<b>BODS and COD</b>	Not available.
<b>Biodegradable/OEDC</b>	Not available.
<b>Mobility</b>	Not available.
<b>Toxicity of the Products of Biodegradation</b>	Not available.
<b>Special Remarks on The Products of Biodegradation</b>	Not available.

### Section 13. Disposal Considerations

<b>Waste Information</b>	Not available.
<b>Waste Stream</b>	Not available.
Consult your local or regional authorities. Always contact a permitted waste disposer (TSD) to assure compliance with all current local, state and federal regulations.	

### Section 14. Transport Information

<b>DOT Classification</b>	<b>Proper Shipping Name:</b> CHROMIUM TRIOXIDE, ANHYDROUS <b>Hazard Class:</b> 5.1, 6.1, 8 <b>UN/NA:</b> UN1463 <b>Packing Group:</b> II <b>Information reported for product/size:</b> 100LB
<b>Marine Pollutant</b>	Not available.
<b>Hazardous Substances Reportable Quantity</b>	Not available.
<b>Special Provisions for Transport</b>	Not applicable.
<b>TDG Classification</b>	<b>Proper Shipping Name:</b> CHROMIUM TRIOXIDE, ANHYDROUS <b>Hazard Class:</b> 5.1, 6.1, 8 <b>UN/NA:</b> UN1463 <b>Packing Group:</b> II <b>Information reported for product/size:</b> 100LB
<b>ADR/RID Classification</b>	ADR (Europe) Information not available.
<b>IMO/IMDG Classification</b>	IMDG Information not available.
<b>ICAO/IATA Classification</b>	See IATA Regulations <b>Proper Shipping Name:</b> CHROMIUM TRIOXIDE, ANHYDROUS <b>Hazard Class:</b> 5.1, 6.1, 8 <b>UN/NA:</b> UN1463 <b>Packing Group:</b> II <b>Information reported for product/size:</b> 100LB

### Section 15. Other Information

#### Label requirements

<b>Hazardous Material Information System (U.S.A.)</b>	<b>Health</b>	3	<b>National Fire Protection Association (U.S.A.)</b>	<p>Fire Hazard</p> <p>Health</p> <p>Reactivity</p> <p>Specific Hazard</p>
	<b>Fire Hazard</b>	0		
	<b>Reactivity</b>	1		
	<b>Personal Protection</b>			

#### References

#### Other Special Considerations

#### Notice to Reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.