SAFETY DATA SHEET
CHROMATE CONVERSION COATING FOR CADMIUM

1. Identification

Product identifier
Product name CHROMATE CONVERSION COATING FOR CADMIUM
Product number 5005

Recommended use of the chemical and restrictions on use
Application Industrial Use

Details of the supplier of the safety data sheet
Supplier SIFCO Applied Surface Concepts
5708 E. Schaaf Road
Independence, Ohio 44131
U.S.A.
Tel.: +1 216-524-0099
Fax: +1 216-524-6331
E-Mail: info@sifcoasc.com

Emergency telephone number
Emergency telephone CHEMTREC (United States) (800) 424-9300; CHEMTREC (International) +1 703-527-3887

2. Hazard(s) identification

Classification of the substance or mixture
Physical hazards Not Classified
Environmental hazards Aquatic Chronic 2 - H411

Label elements
Pictogram
Signal word Danger
CHROMATE CONVERSION COATING FOR CADMIUM

Hazard statements

H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H331 Toxic if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H340 May cause genetic defects.
H350 May cause cancer.
H360FD May damage fertility. May damage the unborn child.
H372 Causes damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe vapor/spray.
P264 Wash contaminated skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P284 [In case of inadequate ventilation] wear respiratory protection.
P301+P310 If swallowed: Immediately call a poison center/doctor.
P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.
P302+P352 If on skin: Wash with plenty of water.
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 If inhaled: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 If exposed or concerned: Get medical advice/attention.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P501 Dispose of contents/container in accordance with national regulations.

Contains

SODIUM DICHROMATE, SULPHURIC ACID 1 %

Other hazards

This product does not contain any substances classified as PBT or vPvB.

3. Composition/Information on ingredients

Mixtures
CHROMATE CONVERSION COATING FOR CADMIUM

SODIUM DICHROMATE

CAS number: 10588-01-9
M factor (Acute) = 1  M factor (Chronic) = 1

Classification
Ox. Sol. 2 - H272
Acute Tox. 3 - H301
Acute Tox. 4 - H312
Acute Tox. 2 - H330
Skin Corr. 1B - H314
Eye Dam. 1 - H318
Resp. Sens. 1 - H334
Skin Sens. 1 - H317
Muta. 1B - H340
Carc. 1B - H350
Repr. 1B - H360FD
STOT SE 3 - H335
STOT RE 1 - H372
Aquatic Acute 1 - H400
Aquatic Chronic 1 - H410

SULPHURIC ACID 1 %

CAS number: 7664-93-9  REACH registration number: 01-2119458838-20-XXXX

Classification
Skin Corr. 1A - H314
Eye Dam. 1 - H318

The Full Text for all Hazard Statements are Displayed in Section 16.

4. First-aid measures

Description of first aid measures

Inhalation  Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Never give anything by mouth to an unconscious person. Get medical attention.

Ingestion  Do not induce vomiting. Never give anything by mouth to an unconscious person. NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Get medical attention immediately.

Skin Contact  Remove contaminated clothing immediately and wash skin with soap and water. Continue to rinse for at least 15 minutes and get medical attention.

Eye contact  It is recommended that suitable facilities for quick drenching or flushing of the eyes and body be provided within the work area for immediate emergency use. Remove affected person from source of contamination. Make sure to remove any contact lenses from the eyes before rinsing. Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes and get medical attention.

Most important symptoms and effects, both acute and delayed

Inhalation  Toxic if inhaled. Coughing, chest tightness, feeling of chest pressure. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
CHROMATE CONVERSION COATING FOR CADMIUM

Ingestion
Harmful if swallowed. May cause chemical burns in mouth and throat. May cause stomach pain or vomiting.

Skin contact
May cause serious chemical burns to the skin. May cause an allergic skin reaction.

Eye contact
Causes severe burns. May cause serious eye damage.

Indication of immediate medical attention and special treatment needed

Notes for the doctor
No specific recommendations.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media
The product is not flammable. Use fire-extinguishing media suitable for the surrounding fire.

Special hazards arising from the substance or mixture

Specific hazards
Toxic and corrosive gases or vapors.

Advice for firefighters

Protective actions during firefighting
Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

Special protective equipment for firefighters
Use protective equipment appropriate for surrounding materials.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions
Follow precautions for safe handling described in this safety data sheet. Avoid inhalation of spray mist and contact with skin and eyes. Provide adequate general and local exhaust ventilation.

Environmental precautions

Environmental precautions
Do not discharge into drains or watercourses or onto the ground. Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

Methods and material for containment and cleaning up

Methods for cleaning up
Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Stop leak if possible without risk. DO NOT touch spilled material! Flush contaminated area with plenty of water. Avoid the spillage or runoff entering drains, sewers or watercourses. Contain spillage with sand, earth or other suitable non-combustible material. Collect and dispose of spillage as indicated in Section 13. Wash thoroughly after dealing with a spillage.

Reference to other sections
Wear protective clothing as described in Section 8 of this safety data sheet. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

7. Handling and storage

Precautions for safe handling

Usage precautions
Avoid spilling. Avoid contact with skin and eyes. Avoid inhalation of vapors and spray/mists. Provide adequate general and local exhaust ventilation.

Conditions for safe storage, including any incompatibilities

Storage precautions
Store in tightly-closed, original container in a dry, cool and well-ventilated place. Protect from freezing and direct sunlight.
CHROMATE CONVERSION COATING FOR CADMIUM

Storage class
Toxic storage. Corrosive storage.

Specific end uses(s)

Specific end use(s)
The identified uses for this product are detailed in Section 1.2.

8. Exposure Controls/personal protection

Control parameters

Occupational exposure limits

SULPHURIC ACID 1 %
Long-term exposure limit (8-hour TWA): OSHA 1 mg/m³
Long-term exposure limit (8-hour TWA): ACGIH 0.2 mg/m³ thoracic fraction
A2
OSHA = Occupational Safety and Health Administration.
ACGIH = American Conference of Governmental Industrial Hygienists.
A2 = Suspected Human Carcinogen.

SODIUM DICHROMATE (CAS: 10588-01-9)

DMEL
Industry - Oral; Short term local effects: 0.01 mg/m³

PNEC
- Fresh water; .00047 mg/l - Marine water; .00047 mg/l - Intermittent release;
.00047 mg/l - Soil; 0.035 mg/kg - Sediment (Freshwater); .15 mg/kg

SULPHURIC ACID ...% (CAS: 7664-93-9)

DNEL
Industry - Inhalation; Short term local effects: 0.1 mg/m³ Industry - Inhalation; Long
term local effects: 0.05 mg/m³

PNEC
- Fresh water; 0.0025 mg/l - Sediment; 0.002 mg/l - Marine water; 0.00025 mg/l -
STP; 8.8 mg/l - Sediment (Marinewater); 0.002 mg/l

Exposure controls

Protective equipment

Appropriate engineering controls
As this product contains ingredients with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits, if use generates dust, fumes, gas, vapor or mist.

Eye/face protection
Tight-fitting safety glasses.

Hand protection
It is recommended that chemical-resistant, impervious gloves are worn. Considering the data
specified by the glove manufacturer, check during use that the gloves are retaining their
protective properties and change them as soon as any deterioration is detected. It is
recommended that gloves are made of the following material: Nitrile rubber.

Other skin and body protection
Appropriate footwear and additional protective clothing complying with an approved standard
should be worn if a risk assessment indicates skin contamination is possible.

Hygiene measures
Do not eat, drink or smoke when using this product. Wash at the end of each work shift and
before eating, smoking and using the toilet.
If ventilation is inadequate, suitable respiratory protection must be worn. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit.

9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Information on basic physical and chemical properties</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
</tr>
<tr>
<td><strong>Color</strong></td>
</tr>
<tr>
<td><strong>Odor</strong></td>
</tr>
<tr>
<td><strong>pH</strong></td>
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<tr>
<td><strong>Relative density</strong></td>
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<tr>
<td><strong>Other information</strong></td>
</tr>
</tbody>
</table>

10. Stability and reactivity

| Reactivity | Acid-reactive materials. There are no known reactivity hazards associated with this product. |
| Stability | Stable at normal ambient temperatures and when used as recommended. |
| Possibility of hazardous reactions | Not determined. |
| Conditions to avoid | Avoid excessive heat for prolonged periods of time. |
| Materials to avoid | Strong alkalis. |
| Hazardous decomposition products | None at ambient temperatures. |

11. Toxicological information

<table>
<thead>
<tr>
<th>Information on toxicological effects</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acute toxicity - oral</strong></td>
</tr>
<tr>
<td>ATE oral (mg/kg)</td>
</tr>
<tr>
<td><strong>Acute toxicity - dermal</strong></td>
</tr>
<tr>
<td>ATE dermal (mg/kg)</td>
</tr>
<tr>
<td><strong>Acute toxicity - Inhalation</strong></td>
</tr>
<tr>
<td>ATE inhalation (dusts/mists mg/l)</td>
</tr>
</tbody>
</table>

Inhalation: Vapors may irritate throat/respiratory system. A single exposure may cause the following adverse effects: Coughing. Difficulty in breathing. Very toxic by inhalation. May cause sensitisation by inhalation. Harmful: danger of serious damage to health by prolonged exposure through inhalation.

Ingestion: May cause irritation. Symptoms following overexposure may include the following: Stomach pain. Nausea, vomiting. Diarrhea. Harmful if swallowed.

Skin Contact: Causes burns. May cause sensitisation by skin contact. May cause an allergic skin reaction.
CHROMATE CONVERSION COATING FOR CADMIUM

Eye contact Causes serious eye damage. Immediate first aid is imperative.

Acute and chronic health hazards May cause genetic defects. May cause cancer.

Route of entry Ingestion Inhalation Skin and/or eye contact

Toxicological information on ingredients.

**SODIUM DICHROMATE**

<table>
<thead>
<tr>
<th>Acute toxicity - oral</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Acute toxicity oral (LD₅₀ mg/kg)</td>
<td>59.0</td>
</tr>
<tr>
<td>Species</td>
<td>Rat</td>
</tr>
<tr>
<td>ATE oral (mg/kg)</td>
<td>100.0</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Acute toxicity - dermal</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Acute toxicity dermal (LD₅₀ mg/kg)</td>
<td>2,000.0</td>
</tr>
<tr>
<td>Species</td>
<td>Rabbit</td>
</tr>
<tr>
<td>ATE dermal (mg/kg)</td>
<td>1,100.0</td>
</tr>
</tbody>
</table>

| Acute toxicity - inhalation (dusts/mists mg/l) | 0.05 |

12. Ecological Information

Ecotoxicity Dangerous for the environment. May cause long-term adverse effects in the aquatic environment.

Toxicity

Toxicity No data available.

Ecological information on ingredients.

**SODIUM DICHROMATE**

<table>
<thead>
<tr>
<th>Acute aquatic toxicity</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>LE(C)₅₀</td>
<td>0.1 &lt; L(E)C50 ≤ 1</td>
</tr>
<tr>
<td>M factor (Acute)</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Acute toxicity - fish</th>
<th></th>
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<tbody>
<tr>
<td>LC₅₀, 96 hour: 13 mg/l, Freshwater fish</td>
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<table>
<thead>
<tr>
<th>Acute toxicity - aquatic invertebrates</th>
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<tr>
<td>, 24 hours: 1.5 mg/l,</td>
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<table>
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<tr>
<th>Acute toxicity - aquatic plants</th>
<th></th>
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<tbody>
<tr>
<td>NOEC, 8 day: 0.1 mg/l, Algae</td>
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</table>

<table>
<thead>
<tr>
<th>Chronic aquatic toxicity</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>M factor (Chronic)</td>
<td>1</td>
</tr>
</tbody>
</table>

Persistance and degradability

7/10
CHROMATE CONVERSION COATING FOR CADMIUM

Persistence and degradability
No data available.

Bioaccumulative potential
The product does not contain any substances expected to be bioaccumulating.

Mobility in soil
The product is soluble in water.

Results of PBT and vPvB assessment
This product does not contain any substances classified as PBT or vPvB.

Other adverse effects
Not determined.

13. Disposal considerations

Waste treatment methods
Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements.

14. Transport information

UN Number
UN No. (DOT) 3289
UN No. (IMDG) 3289
UN No. (ICAO) 3289

UN proper shipping name
Proper shipping name (DOT) TOXIC LIQUID, CORROSIVE, INORGANIC, N.O.S. (SODIUM DICHROMATE, SULPHURIC ACID...%)
Proper shipping name (IMDG) TOXIC LIQUID, CORROSIVE, INORGANIC, N.O.S. (SODIUM DICHROMATE, SULPHURIC ACID...%)
Proper shipping name (ICAO) TOXIC LIQUID, CORROSIVE, INORGANIC, N.O.S. (SODIUM DICHROMATE, SULPHURIC ACID...%)

Transport hazard class(es)
IMDG Class 6.1
IMDG subsidiary risk 8
ICAO class/division 6.1
ICAO subsidiary risk 8

Transport labels

Packing group
DOT pack group II
CHROMATE CONVERSION COATING FOR CADMIUM

IMDG packing group II
ICAO packing group II

Environmental hazards
Environmentally Hazardous Substance

Special precautions for user
EmS F-A, S-B

Transport in bulk according to No information required.
Annex II of MARPOL 73/78
and the IBC Code

15. Regulatory information

US Federal Regulations
SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities
Sulphuric Acid
1000 lbs

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)
Sulphuric Acid
Final CERCLA RQ: 1000 lbs

SARA Extremely Hazardous Substances EPCRA Reportable Quantities
Sulphuric Acid
EPCRA RQ: 1000 lbs

SARA 313 Emission Reporting
Exempt.

CAA Accidental Release Prevention
HAP
Sodium Dichromate

SARA (311/312) Hazard Categories
Acute
Chronic

OSHA Highly Hazardous Chemicals
Exempt.

US State Regulations
California Proposition 65 Carcinogens and Reproductive Toxins
Sodium Dichromate

California Directors List of Hazardous Substances
Sodium Dichromate
Sulphuric Acid

Inventories
US - TSCA
All ingredients are present.
# CHROMATE CONVERSION COATING FOR CADMIUM

## 16. Other information

<table>
<thead>
<tr>
<th>Revision date</th>
<th>5/15/2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revision</td>
<td>1</td>
</tr>
</tbody>
</table>
| Hazard statements in full | H272 May intensify fire; oxidizer.  
H301 Toxic if swallowed.  
H302 Harmful if swallowed.  
H312 Harmful in contact with skin.  
H314 Causes severe skin burns and eye damage.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H330 Fatal if inhaled.  
H331 Toxic if inhaled.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H335 May cause respiratory irritation.  
H340 May cause genetic defects.  
H350 May cause cancer.  
H360FD May damage fertility. May damage the unborn child.  
H372 Causes damage to organs through prolonged or repeated exposure.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.  
H411 Toxic to aquatic life with long lasting effects. |
| NFPA - flammability hazard | Will not burn. (0) |
| NFPA - health hazard | Extremely hazardous, serious injury. (3) |
| NFPA - instability hazard | Normally stable. (0) |
| NFPA - special hazard | OX |

The Information in this data sheet is believed to be correct but neither we nor our employees or agents give any warranty or make any representation to the accuracy thereof and accept no liability for any loss, injury or damage which may result in it's use. The sole purpose of this data sheet is to provide guidance on the safe handling and use of the products to which it relates. It does not form part of any product specification nor part of any contract. It is not practical for the guidance and information in this data sheet to cover every conceivable application of a product and as we may not be aware of the use to which the products covered by this data sheet are to be put it remains the responsibility of the user to conduct it's own tests and to satisfy itself as to the suitability of the product.