1. PRODUCT AND COMPANY IDENTIFICATION

Product name: BONDERITE M-CR 1200S RTU AERO known as ALODINE 1200S RTU BRUSH  
IDH number: 596135

Product type: Conversion coating  
Restriction of Use: None identified

Company address:  
Henkel Corporation  
One Henkel Way  
Rocky Hill, Connecticut 06067

Contact information:  
Telephone: (860) 571-5100  
MEDICAL EMERGENCY Phone: Poison Control Center  
1-877-671-4608 (toll free) or 1-303-592-1711  
TRANSPORT EMERGENCY Phone: CHEMTREC  
1-800-424-9300 (toll free) or 1-703-527-3887  
Internet: www.henkelna.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER: CAUSES SEVERE SKIN BURNS AND EYE DAMAGE. MAY CAUSE AN ALLERGIC SKIN REACTION. MAY CAUSE CANCER.

<table>
<thead>
<tr>
<th>HAZARD CLASS</th>
<th>HAZARD CATEGORY</th>
</tr>
</thead>
<tbody>
<tr>
<td>SKIN CORROSION</td>
<td>1C</td>
</tr>
<tr>
<td>SERIOUS EYE DAMAGE</td>
<td>1</td>
</tr>
<tr>
<td>SKIN SENSITIZATION</td>
<td>1</td>
</tr>
<tr>
<td>CARCINOGENICITY</td>
<td>1A</td>
</tr>
</tbody>
</table>

PICTOGRAM(S)

Precautionary Statements

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing vapors, mist, or spray. Wash affected area thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, clothing, eye and face protection.

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

Storage: Store locked up.

Disposal: Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Component(s)</th>
<th>CAS Number</th>
<th>Percentage*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chromic acid</td>
<td>7738-94-5</td>
<td>0.1 - 1</td>
</tr>
<tr>
<td>Potassium tetrafluoroborate</td>
<td>14075-53-7</td>
<td>0.1 - 1</td>
</tr>
<tr>
<td>Tripotassium hexacyanoferrate</td>
<td>13746-66-2</td>
<td>0.1 - 1</td>
</tr>
<tr>
<td>Sodium fluoride</td>
<td>7681-49-4</td>
<td>0.1 - 1</td>
</tr>
</tbody>
</table>

* Exact percentages may vary or are trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. FIRST AID MEASURES

Inhalation: If mist or vapor of this product is inhaled, remove person immediately to fresh air. Seek medical attention if symptoms develop or persist.

Skin contact: Remove contaminated clothing and footwear. For skin contact flush with large amounts of water. Obtain medical attention if irritation persists.

Eye contact: In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.

Ingestion: Get immediate medical attention. DO NOT induce vomiting unless directed to do so by medical personnel. Give one to two glasses of water or milk. Never give anything by mouth to a victim who is unconscious or is having convulsions.

Symptoms: See Section 11.

Notes to physician: Treatment of hypocalcemia associated with corrosive fluoride compounds exposure may be corrected by intravenous calcium gluconate or calcium chloride. Treatment of hypomagnesemia may be corrected by intravenous magnesium sulfate.

5. FIRE FIGHTING MEASURES

Extinguishing media: Use media appropriate for surrounding material.

Special firefighting procedures: Wear full protective clothing. Wear self-contained breathing apparatus.

Unusual fire or explosion hazards: This product is an aqueous mixture which will not burn.

Hazardous combustion products: Irritating and toxic gases or fumes may be released during a fire.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Wear suitable protective clothing, gloves and eye/face protection.

Clean-up methods: Absorb spill with inert material. Shovel material into appropriate container for disposal. Dispose of according to Federal, State and local governmental regulations.
7. HANDLING AND STORAGE

Handling:
Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Do not take internally. For industrial use only. Clothing or other material wet with this product and allowed to dry may become flammable.

Storage:
Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials. Protect from freezing.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

<table>
<thead>
<tr>
<th>Hazardous Component(s)</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chromic acid</td>
<td>0.05 mg/m³ TWA (as Cr)</td>
<td>0.005 mg/m³ TWA OSHA_ACT</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.0025 mg/m³ OSHA_ACT Ceiling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potassium tetrafluoroborate</td>
<td>6 mg/m³ STEL Inhalable fraction</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>2 mg/m³ TWA Inhalable fraction</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Tripotassium hexacyanoferrate</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Sodium fluoride</td>
<td>2.5 mg/m³ TWA (as F)</td>
<td>2.5 mg/m³ PEL (as F)</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.5 mg/m³ TWA Dust.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Engineering controls:
Provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from the handling of this product.

Respiratory protection:
If ventilation is not sufficient to effectively prevent buildup of aerosols, mists or vapors, appropriate NIOSH/MSHA respiratory protection must be provided.

Eye/face protection:
Wear chemical goggles; face shield (if splashing is possible).

Skin protection:
Chemical resistant, impermeable gloves. Gloves should be tested to determine suitability for prolonged contact. Use of impervious apron and boots are recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid
Color: Orange
Odor: Odorless
Odor threshold: Not available.
pH: < 2
Vapor pressure: Not determined
Boiling point/range: > 98.9 °C (> 210°F)
Melting point/ range: Not determined
Specific gravity: 1.0 - 1.1
Vapor density: Not determined
Flash point: Not applicable
Flammable/Explosive limits - lower: Not available.
Flammable/Explosive limits - upper: Not available.
Autoignition temperature: Not applicable
Flammability: Not applicable
Evaporation rate: Not determined
**Solubility in water:** Complete
**Partition coefficient (n-octanol/water):** Not determined
**VOC content:** Not applicable
**Viscosity:** Not available.
**Decomposition temperature:** Not available.

## 10. STABILITY AND REACTIVITY

**Stability:** Stable at normal conditions.

**Hazardous reactions:** Will not occur.

**Hazardous decomposition products:** May liberate hydrogen fluoride. When heated to decomposition or on contact with strong acids potassium ferric cyanide may emit fumes of cyanide.

**Incompatible materials:** Avoid contact with organic materials, oils, greases, and any oxidizable materials. This product may react with strong alkalis.

**Reactivity:** Not available.

**Conditions to avoid:** Store away from incompatible materials.

## 11. TOXICOLOGICAL INFORMATION

**Relevant routes of exposure:** Skin, Inhalation, Eyes

**Potential Health Effects/Symptoms**

- **Inhalation:** Inhalation of mists or vapors may produce upper airway edema, wheezing, pulmonary edema, pneumonitis, cyanosis (blue discoloration of the skin), respiratory failure and death. Contains fluorides. Exposure to fluorides over years may cause fluorosis.

- **Skin contact:** Contact with broken skin may lead to formation of firmly marginated "chrome sores". Product contains chromium, which may cause an allergic skin sensitization reaction. A component in this product may be harmful or fatal if absorbed through the skin, especially if skin is damaged.

- **Eye contact:** Contact can cause moderate to severe irritation and possible injury to the eyes.

- **Ingestion:** Ingestion of this product may cause nausea, vomiting and diarrhea. This product is harmful or fatal if swallowed. Ingestion of small amounts of this product may result in potentially fatal hypocalcemia and systemic toxicity.

### Hazardous Component(s) and Immediate and Delayed Health Effects

<table>
<thead>
<tr>
<th>Hazardous Component(s)</th>
<th>LD50s and LC50s</th>
<th>Immediate and Delayed Health Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chromic acid</td>
<td>None</td>
<td>Allergen, Blood, Carcinogen, Central nervous system, Corrosive, Developmental, Eyes, Gastrointestinal, Irritant, Kidney, Liver, Mutagen, Reproductive, Respiratory</td>
</tr>
<tr>
<td>Potassium tetrafluoroborate</td>
<td>None</td>
<td>Cardiac, Central nervous system, Developmental, Gastrointestinal, Irritant, Kidney, Metabolic, Reproductive</td>
</tr>
<tr>
<td>Tripotassium hexacyanoferrate</td>
<td>Oral LD50 (Mouse) = 44.3 mg/kg</td>
<td>Blood, Cardiac, Central nervous system, Corrosive, Gastrointestinal tract, Irritant, Kidney, Metabolic, Muscle, Teeth, Less weight gain and food intake.</td>
</tr>
<tr>
<td>Sodium fluoride</td>
<td>Oral LD50 (Mouse) = 46.0 mg/kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oral LD50 (Rat) = 32.0 mg/kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oral LD50 (Rat) = 51.6 mg/kg</td>
<td></td>
</tr>
</tbody>
</table>

### Hazardous Component(s) and NTP Carcinogen

<table>
<thead>
<tr>
<th>Hazardous Component(s)</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chromic acid</td>
<td>Known To Be Human Carcinogen.</td>
<td>Group 1</td>
<td>Yes</td>
</tr>
<tr>
<td>Potassium tetrafluoroborate</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Tripotassium hexacyanoferrate</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Sodium fluoride</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

IDH number: 596135
Product name: BONDERITE M-CR 1200S RTU AERO known as ALODINE 1200S RTU BRUSH
Page 4 of 6
12. ECOLOGICAL INFORMATION

Ecological information: Not available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.

Hazardous waste number: This product, if discarded directly, would be a characteristic RCRA corrosive waste (D002). This product contains chromium which is a hazardous waste (D007).

14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

U.S. Department of Transportation Ground (49 CFR)
- Proper shipping name: Chromic acid solution
- Hazard class or division: 8
- Identification number: UN 1755
- Packing group: III
- DOT Hazardous Substance(s): Chromic acid

International Air Transportation (ICAO/IATA)
- Proper shipping name: Chromic acid solution
- Hazard class or division: 8
- Identification number: UN 1755
- Packing group: III

Water Transportation (IMO/IMDG)
- Proper shipping name: CHROMIC ACID SOLUTION
- Hazard class or division: 8
- Identification number: UN 1755
- Packing group: III

15. REGULATORY INFORMATION

United States Regulatory Information

- TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
- TSCA 12 (b) Export Notification: None above reporting de minimis
- CERCLA/SARA Section 302 EHS: None above reporting de minimis.
- CERCLA/SARA Section 311/312: Immediate Health, Delayed Health
- CERCLA/SARA Section 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Chromic acid (CAS# 7738-94-5).
- CERCLA Reportable quantity: Chromic acid (CAS# 7738-94-5) 10 lbs. (4.54 kg)
- California Proposition 65: This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

- CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.
16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Safety Data Sheet format.

Prepared by: Mark Mau, Manager, Regulatory Affairs

Issue date: 04/28/2017

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