1. PRODUCT AND COMPANY IDENTIFICATION

Product name: BONDERITE M-CR 1200S AERO
Product type: Conversion coating
Restriction of Use: None identified
IDH number: 593964
Region: United States
Company address: Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER: CONTAINS FLUORIDES. MAY CAUSE DELAYED BURNS (NOT IMMEDIATELY PAINFUL OR VISIBLE)! LONG TERM EXPOSURE TO FLUORIDES OVER YEARS MAY CAUSE FLUOROSIS!
MAY INTENSIFY FIRE; OXIDIZER.
TOXIC IF SWALLOWED.
FATAL IN CONTACT WITH SKIN OR IF INHALED
CAUSES SEvere SKIN BURNS AND EYE DAMAGE.
MAY CAUSE AN ALLERGIC SKIN REACTION.
MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS OR BREATHING DIFFICULTIES IF INHALED.
MAY CAUSE GENETIC DEFECTS.
MAY CAUSE CANCER.

HAZARD CLASS

<table>
<thead>
<tr>
<th>CLASS</th>
<th>CATEGORY</th>
</tr>
</thead>
<tbody>
<tr>
<td>OXIDIZING SOLID</td>
<td>2</td>
</tr>
<tr>
<td>ACUTE TOXICITY ORAL</td>
<td>3</td>
</tr>
<tr>
<td>ACUTE TOXICITY INHALATION</td>
<td>2</td>
</tr>
<tr>
<td>ACUTE TOXICITY DERMAL</td>
<td>2</td>
</tr>
<tr>
<td>SKIN CORROSION</td>
<td>1B</td>
</tr>
<tr>
<td>SERIOUS EYE DAMAGE</td>
<td>1</td>
</tr>
<tr>
<td>RESPIRATORY SENSITIZATION</td>
<td>1</td>
</tr>
<tr>
<td>SKIN SENSITIZATION</td>
<td>1</td>
</tr>
<tr>
<td>GERM CELL MUTAGENICITY</td>
<td>1B</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. Keep away from heat. Keep away from clothing and other combustible materials. Take any precaution to avoid mixing with combustibles. Do not breathe dust or fumes. Do not get in eyes, on skin, or on clothing. Wash affected area thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, clothing, eye and face protection. [In case of inadequate ventilation] wear respiratory protection.

Response: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN: Gently wash with plenty of soap and water. Immediately call a POISON CENTER or doctor/physician. 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. Take off contaminated clothing. In case of fire: Use foam, dry chemical or carbon dioxide to extinguish.

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

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


See Section 11 for additional toxicological information.

### 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>Chromium(VI) oxide</td>
<td>1333-82-0</td>
<td>50 - 60</td>
</tr>
<tr>
<td>Potassium tetrafluoroborate</td>
<td>14075-53-7</td>
<td>20 - 30</td>
</tr>
<tr>
<td>Tripotassium hexacyanoferrate</td>
<td>13746-66-2</td>
<td>10 - 20</td>
</tr>
<tr>
<td>Sodium fluoride</td>
<td>7681-49-4</td>
<td>5 - 10</td>
</tr>
<tr>
<td>Dipotassium hexafluorozirconate</td>
<td>16923-95-8</td>
<td>5 - 10</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 inhaled, immediately remove the affected person to fresh air. Get medical attention.

**Skin contact:** Rinse with large amounts of running water. GET MEDICAL ATTENTION IMMEDIATELY! If iced 0.13% benzalkonium chloride (Zephiran) solution or 2.5% calcium gluconate gel are available, the rinsing may be limited to 5 minutes, with the soaks or gel applied as soon as the rinsing is stopped. If benzalkonium chloride or calcium gluconate gel is not available, rinsing must continue until medical treatment is provided. Rinse with running water and soap.

**Eye contact:** In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.
Ingestion: DO NOT induce vomiting unless directed to do so by medical personnel. Get immediate medical attention.

Symptoms: See Section 11.

Notes to physician: Ocular exposure to corrosive fluoride compounds has been treated with isotonic sodium chloride or magnesium chloride. Dermal exposure to corrosive fluoride compounds has been treated with calcium gluconate or calcium carbonate gel applied topically to the affected areas to relieve pain at the site of exposure. 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: Oxidizing agent, may cause spontaneous ignition of combustible materials. Formation of toxic gases is possible during heating or in fires.

Hazardous combustion products: Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

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 appropriate protective equipment and clothing during clean-up.

Clean-up methods: Spills should be cleaned immediately to prevent dispersion of airborne dusts. Do not allow product to enter sewer or waterways. Dispose of according to Federal, State and local governmental regulations.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin and clothing. Avoid breathing dust. Wash thoroughly after handling. For industrial use only.

Storage: For safe storage, store between 5 °C (41°F) and 40 °C (104°F) Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials.

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>Chromium(VI) oxide</td>
<td>0.05 mg/m³ TWA (as Cr)</td>
<td>0.005 mg/m³ TWA</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.0025 mg/m³ OSHA_ACT</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.1 mg/m³ Ceiling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potassium tetrafluoroborate</td>
<td>None</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>
<tr>
<td>Dipotassium hexafluorozirconate</td>
<td>5 mg/m³ TWA (as Zr)</td>
<td>5 mg/m³ PEL (as Zr)</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>10 mg/m³ STEL (as Zr)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Engineering controls:** Ventilation should effectively remove and prevent buildup of any dust generated from the handling of this product.
- **Respiratory protection:** If ventilation is not sufficient to effectively prevent buildup of dust, appropriate NIOSH/MSHA respiratory protection must be provided.
- **Eye/face protection:** Wear chemical goggles or a full face shield.
- **Skin protection:** Chemical resistant, impermeable gloves. The use of butyl rubber gloves is recommended. Use of impervious apron and boots are recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

- **Physical state:** Solid
- **Color:** orange
- **Odor:** Bland
- **Odor threshold:** Not available.
- **pH:** 1.30 - 1.60
- **Vapor pressure:** Not determined
- **Boiling point/range:** Not applicable
- **Melting point/ range:** Not available.
- **Vapor density:** Not applicable
- **Flash point:** Not applicable
- **Flammable/Explosive limits - lower:** Not applicable
- **Flammable/Explosive limits - upper:** Not applicable
- **Autoignition temperature:** Not applicable
- **Flammability:** Not applicable
- **Evaporation rate:** Not applicable
- **Solubility in water:** Appreciable
- **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.
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: Oxidizing agent, may cause spontaneous ignition of combustible materials.

11. TOXICOLOGICAL INFORMATION

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

Potential Health Effects/Symptoms

Inhalation: Inhalation of dusts of this product may cause severe irritation and burns to the respiratory tract. May cause sensitization by inhalation.
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. Following skin exposure to this product, the sensation of irritation or pain may be delayed.
Eye contact: This product is severely irritating to the eyes and may cause irreversible damage including burns and blindness.
Ingestion: This product may produce corrosive damage to the gastrointestinal tract if it is swallowed. Ingestion of small amounts of this product may result in potentially fatal hypocalcemia and systemic toxicity.

<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>Chromium(VI) oxide</td>
<td>Oral LD50 (Rat) = 25 mg/kg</td>
<td>Allergen, Blood, Central nervous system, Corrosive, Carcinogenic, Developmental, Eyes, Gastrointestinal, Irritant, Kidney, Liver, Mutagen, Reproductive, Respiratory</td>
</tr>
<tr>
<td></td>
<td>Dermal LD50 (Rabbit) = 30 mg/kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inhalation LC50 (Rat, 4 h) = 0.087 mg/l</td>
<td></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>None</td>
<td></td>
</tr>
<tr>
<td>Sodium fluoride</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></td>
<td>Oral LD50 (Mouse) = 48.0 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) = 51.0 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Dipotassium hexafluorozirconate</td>
<td>Oral LD50 (Mouse) = 98 mg/kg</td>
<td>Allergen, Blood, Cardiac, Central nervous system, Corrosive, Gastrointestinal tract, Irritant, Kidney, Metabolic, Muscle, Teeth, Less weight gain and food intake.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous Component(s)</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chromium(VI) oxide</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>
<tr>
<td>Dipotassium hexafluorozirconate</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>
12. ECOLOGICAL INFORMATION

Ecological information: Do not empty into drains / surface water / ground water.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

Hazardous waste number: This product contains chromium which is a hazardous waste (D007). If discarded, this product is considered a RCRA ignitable waste, D001. This product, if discarded, may be characterized as a RCRA corrosive waste, D002. Wastes must be tested using methods described in 40 CFR Part 261 to determine if it meets applicable definitions of hazardous wastes.

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: Chromium trioxide, anhydrous
Hazard class or division: 5.1 (6.1, 8)
Identification number: UN 1463
Packing group: II
DOT Hazardous Substance(s): Chromic acid, Sodium fluoride

International Air Transportation (ICAO/IATA)
Proper shipping name: Chromium trioxide, anhydrous
Hazard class or division: 5.1 (6.1, 8)
Identification number: UN 1463
Packing group: II

Water Transportation (IMO/IMDG)
Proper shipping name: CHROMIUM TRIOXIDE, ANHYDROUS
Hazard class or division: 5.1 (6.1, 8)
Identification number: UN 1463
Packing group: II
Marine pollutant: Chromium trioxide

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: Chromium(VI) oxide (CAS# 1333-82-0).
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). Chromium(VI) oxide (CAS# 1333-82-0).
CERCLA Reportable quantity: Chromium(VI) oxide (CAS# 1333-82-0) 10 lbs. (4.54 kg)
Sodium fluoride (CAS# 7681-49-4) 1,000 lbs. (454 kg)
Dipotassium hexafluorozirconate (CAS# 16923-95-8) 1,000 lbs. (454 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 Material Safety Data Sheet format.

Prepared by: Regulatory Affairs
Issue date: 03/22/2018

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