



Revision Number: 005.3

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1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	BONDERITE M-CR 1001 AERO known as ALODINE 1001	IDH number:	594693
Product type/use:	Conversion coating	Item number:	594693
Restriction of Use:	None identified	Region:	United States
Company address:	Contact information:		
Henkel Corporation	Telephone: +1 (860) 571-5100		
One Henkel Way	MEDICAL EMERGENCY Phone: Poison Control Center		
Rocky Hill, Connecticut 06067	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:	MAY CAUSE AN ALLERGIC SKIN REACTION. MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS OR BREATHING DIFFICULTIES IF INHALED. MAY CAUSE GENETIC DEFECTS. MAY CAUSE CANCER. MAY DAMAGE FERTILITY OR THE UNBORN CHILD.

HAZARD CLASS	HAZARD CATEGORY
RESPIRATORY SENSITIZATION	1
SKIN SENSITIZATION	1
GERM CELL MUTAGENICITY	1B
CARCINOGENICITY	1A
REPRODUCTIVE TOXICITY	1B



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. 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 ON SKIN: Wash with plenty of water. IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
Chromic acid	7738-94-5	0.1 - 1
Dipotassium hexafluorozirconate	16923-95-8	0.1 - 1

* 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. Delayed effects possible after inhalation. Administer oxygen or artificial respiration as needed. Do not use mouth-to-mouth method if victim ingested or inhaled the substance.
Skin contact:	Remove contaminated clothing and footwear. 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. Launder contaminated clothing before reuse. Discard any shoes or clothing items that cannot be decontaminated.
Eye contact:	Immediately flush affected eye with large amounts of gently flowing water or 0.9% sterile saline solution for at least 15 minutes. Hold eyelid wide open. Get immediate medical attention. Eye flushing should continue during transportation to a doctor.
Ingestion:	Get medical attention. Do not induce vomiting. If individual is conscious, wash out mouth with water. Provide a glass of water to dilute the material in the stomach. 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. If evaporated to dryness, solid residue is an oxidizing agent and may cause spontaneous ignition of combustible materials.
Hazardous combustion products:	Upon decomposition, this product may yield gaseous nitrogen oxides, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. Chromium oxide. 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 appropriate protective equipment and clothing during clean-up. Block any potential routes to water systems.
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:** Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Avoid breathing vapors or mists of this product. Use only with adequate ventilation. Launder work clothes frequently. Do not store or consume food, drink, or tobacco products in areas where they may become contaminated with this material. Do not take internally. Clothing or other material wet with this product and allowed to dry may become flammable. For industrial use only.
- 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.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Chromic acid	0.0005 mg/m ³ STEL (as Cr(VI)) Inhalable fraction. 0.0002 mg/m ³ TWA (as Cr(VI)) Inhalable fraction. 0.0005 mg/m ³ STEL (as Cr(VI)) Inhalable fraction. (SKIN) (as Cr(VI)) Inhalable fraction. (Dermal sensitization) (Respiratory sensitization)	0.005 mg/m ³ TWA 0.0025 mg/m ³ OSHA_ACT 0.1 mg/m ³ Ceiling	None	None
Dipotassium hexafluorozirconate	5 mg/m ³ TWA (as Zr) 10 mg/m ³ STEL (as Zr) 2.5 mg/m ³ TWA (as F)	5 mg/m ³ PEL (as Zr) 2.5 mg/m ³ PEL (as F) 2.5 mg/m ³ TWA Dust.	None	None

- 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:** Wear impervious gloves for prolonged contact. Gloves should be tested to determine suitability for prolonged contact. Use of impervious boots is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Color:	Orange
Odor:	None
Odor threshold:	Not available.
pH:	2 - 3
Vapor pressure:	Not applicable
Boiling point/range:	212 °F (100°C)
Melting point/ range:	Not available.
Specific gravity:	1.00 - 1.01
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 available.
Solubility in water: Complete
Partition coefficient (n-octanol/water): Not available.
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: Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. May liberate hydrogen fluoride. Chromium oxide.
Incompatible materials: This product may react with strong reducing agents. Avoid contact with organic materials, oils, greases, and any oxidizable materials. Strong bases. Metals.
Reactivity: Not available.
Conditions to avoid: Store away from incompatible materials.

11. TOXICOLOGICAL INFORMATION

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

Potential Health Effects/Symptoms

Inhalation: May be harmful or fatal if inhaled. Nasal itch and soreness, perforation of the nasal septum, dental erosion, and chronic asthmatic bronchitis may result from repeated exposure. Mists, vapors or liquid may cause severe irritation or burns. Prolonged or repeated breathing may cause ulceration of nasal membranes.
Skin contact: A component in this product may be absorbed through the skin in harmful amounts. Mists, vapors or liquid may cause severe irritation or burns. Product contains chromium, which may cause an allergic skin sensitization reaction. Contact with broken skin may lead to formation of firmly marginated "chrome sores". Liquid or vapor can cause fluoride-type irritation or burns which may not be immediately painful or visible.
Eye contact: This product is severely irritating to the eyes and may cause irreversible damage including burns and blindness.
Ingestion: Harmful or fatal if swallowed. May cause burns of the mouth, throat and stomach. May also cause gastrointestinal disturbances such as nausea, vomiting, abdominal pain, and diarrhea.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Chromic acid	None	Allergen, Blood, Carcinogen, Central nervous system, Corrosive, Developmental, Eyes, Gastrointestinal, Irritant, Kidney, Liver, Mutagen, Reproductive, Respiratory
Dipotassium hexafluorozirconate	Oral LD50 (Mouse) = 98 mg/kg	Allergen, Blood, Cardiac, Central nervous system, Corrosive, Gastrointestinal tract, Irritant, Kidney, Lung, Metabolic, Muscle, Teeth, Less weight gain and food intake.

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Chromic acid	Known To Be Human Carcinogen.	Group 1	Yes
Dipotassium hexafluorozirconate	No	No	No

12. ECOLOGICAL INFORMATION

Ecological information: Not available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

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

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: RQ, Environmentally hazardous substance, liquid, n.o.s.
Hazard class or division: 9
Identification number: UN 3082
Packing group: III
DOT Hazardous Substance(s): Chromic acid

International Air Transportation (ICAO/IATA)

Proper shipping name: RQ, Environmentally hazardous substance, liquid, n.o.s.
Hazard class or division: 9
Identification number: UN 3082
Packing group: III

Water Transportation (IMO/IMDG)

Proper shipping name: RQ, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Hazard class or division: 9
Identification number: UN 3082
Packing group: III

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed as active or are exempt from listing on the Toxic Substances Control Act (TSCA) inventory.

TSCA 12 (b) Export Notification: Chromic acid (CAS# 7738-94-5).

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: Regulatory Affairs

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