



Revision Number: 005.0

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1. PRODUCT AND COMPANY IDENTIFICATION

Product name: BONDERITE M-CR 600RTU AERO
known as ALODINE 600 RTU

Product type: Conversion coating

Restriction of Use: None identified

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

IDH number: 594094

Region: United States

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: HARMFUL IF SWALLOWED OR IF INHALED.
 MAY CAUSE AN ALLERGIC SKIN REACTION.
 MAY CAUSE GENETIC DEFECTS.
 MAY CAUSE CANCER.

HAZARD CLASS	HAZARD CATEGORY
ACUTE TOXICITY ORAL	4
ACUTE TOXICITY INHALATION	4
SKIN SENSITIZATION	1
GERM CELL MUTAGENICITY	1B
CARCINOGENICITY	1A

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 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. Use personal protective equipment as required.

Response: If SWALLOWED: Immediately call poison control or physician if you feel unwell. IF ON SKIN: Wash with plenty of water. IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 IF exposed or concerned: Get medical attention. Rinse mouth. 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*
Sodium borofluoride	13755-29-8	0.1 - 1
Sodium chromate	7775-11-3	0.1 - 1
Dipotassium hexafluorozirconate	16923-95-8	0.1 - 1
Sodium nitrate	7631-99-4	0.1 - 1
Chromic acid	7738-94-5	0.1 - 1

* Exact percentage is a 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. Seek immediate medical attention. If irritation persists, repeat flushing and get medical attention. Discard any shoes or clothing items that cannot be decontaminated.
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. 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.

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:	Oxides of nitrogen.

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. Do not allow product to enter sewer or waterways.
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. Avoid breathing mists or aerosols of this product. Wash thoroughly after handling. Provide adequate ventilation. For industrial use only. Do not take internally.

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.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Sodium borofluoride	2 mg/m3 TWA Inhalable fraction. 6 mg/m3 STEL Inhalable fraction.	None	None	None
Sodium chromate	0.05 mg/m3 TWA (as Cr)	0.005 mg/m3 TWA 0.0025 mg/m3 OSHA_ACT 0.1 mg/m3 Ceiling	None	None
Dipotassium hexafluorozirconate	5 mg/m3 TWA (as Zr) 10 mg/m3 STEL (as Zr) 2.5 mg/m3 TWA (as F)	5 mg/m3 PEL (as Zr) 2.5 mg/m3 PEL (as F) 2.5 mg/m3 TWA Dust.	None	None
Sodium nitrate	None	None	None	None
Chromic acid	0.05 mg/m3 TWA (as Cr)	0.005 mg/m3 TWA 0.0025 mg/m3 OSHA_ACT 0.1 mg/m3 Ceiling	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 apron and boots are recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Color:	Orange
Odor:	Bland
Odor threshold:	Not available.
pH:	< 2
Vapor pressure:	Not determined
Boiling point/range:	> 100 °C (> 212°F)
Melting point/ range:	Not determined
Specific gravity:	1.01 - 1.03
Vapor density:	Not determined

Flash point:	Not applicable
Flammable/Explosive limits - lower:	Not applicable
Flammable/Explosive limits - upper:	Not applicable
Autoignition temperature:	Not applicable
Evaporation rate:	Not determined
Solubility in water:	Complete
Partition coefficient (n-octanol/water):	Not determined
VOC content:	0 % (calculated)
Viscosity:	Not available.
Decomposition temperature:	Not available.

10. STABILITY AND REACTIVITY

Stability:	Stable at normal conditions.
Hazardous reactions:	Will not occur.
Hazardous decomposition products:	Decomposes with heat to produce oxides of nitrogen.
Incompatible materials:	Avoid contact with organic materials, oils, greases, and any oxidizable materials.
Reactivity:	Not available.
Conditions to avoid:	None identified.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects/Symptoms

Inhalation:	Mists, vapors or liquid may cause severe irritation or burns. Prolonged or repeated breathing may cause ulceration of nasal membranes.
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. Massive overexposures may lead to kidney failure and death.
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.

Acute inhalation product toxicity: Acute toxicity estimate (ATE) 4 h 4.4 mg/l

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Sodium borofluoride	None	Cardiac, Central nervous system, Developmental, Gastrointestinal, Irritant, Kidney, Metabolic, Reproductive
Sodium chromate	Oral LD50 (RAT) = 13 - 28 mg/kg Oral LD50 (RAT) = 51.91 mg/kg Oral LD50 (RAT) = 51.91 mg/kg Oral LD50 (RAT) = 13 mg/kg Oral LD50 (RAT) = 28 mg/kg Dermal LD50 () = 533 mg/kg Dermal LD50 () = 1,600 mg/kg Dermal LD50 () = 426 mg/kg Dermal LD50 (RABBIT) = 426 mg/kg Dermal LD50 (RABBIT) = 553 mg/kg Dermal LD50 (RABBIT) = 1,600 mg/kg Inhalation LC50 () = 0.033 mg/l Inhalation LC50 () = 0.10414 mg/l Inhalation LC50 (RAT, 4 h) = 0.033 mg/l Inhalation LC50 (RAT) = 0.10414 mg/l	Irritant, Respiratory, Central nervous system, Allergen, Liver, Kidney, Developmental, Reproductive, Corrosive, Carcinogen, Mutagen, Blood
Dipotassium hexafluorozirconate	None	Allergen, Blood, Cardiac, Central nervous system, Corrosive, Gastrointestinal tract, Irritant, Kidney, Lung, Metabolic, Muscle, Teeth, Less weight gain and food intake.
Sodium nitrate	Oral LD50 (RAT) = 1,267 mg/kg Oral LD50 (RABBIT) = 1,600 mg/kg Oral LD50 (RABBIT) = 1,955 mg/kg Oral LD50 (RABBIT) = 2,680 mg/kg	Blood, Central nervous system, Corrosive, Gastrointestinal, Irritant
Chromic acid	None	Allergen, Blood, Carcinogen, Central nervous system, Corrosive, Developmental, Eyes, Gastrointestinal, Irritant, Kidney, Liver, Mutagen, Reproductive, Respiratory

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

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

International Air Transportation (ICAO/IATA)

Proper shipping name: 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: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Hazard class or division: 9
Identification number: UN 3082
Packing group: III
Additional information: IMDG-Code: Segregation group 1- Acids

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: Sodium chromate (CAS# 7775-11-3).
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). Sodium chromate (CAS# 7775-11-3). Chromic acid (CAS# 7738-94-5).
CERCLA Reportable quantity: Chromic acid (CAS# 7738-94-5) 10 lbs. (4.54 kg)
Sodium chromate (CAS# 7775-11-3) 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/NDL 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.

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