



Revision Number: 005.4

Issue date: 10/20/2021

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: BONDERITE M-CR 600RTU AERO
known as ALODINE 600 RTU
IDH number: 594094
Product type/use: Conversion coating
Restriction of Use: None identified
Region: United States
Company address:
 Henkel Corporation
 One Henkel Way
 Rocky Hill, Connecticut 06067
Contact information:
 Telephone: +1 (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 SKIN IRRITATION.
 MAY CAUSE AN ALLERGIC SKIN REACTION.
 CAUSES SERIOUS EYE IRRITATION.
 HARMFUL IF INHALED.
 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
ACUTE TOXICITY INHALATION	4
SKIN IRRITATION	2
EYE IRRITATION	2A
RESPIRATORY SENSITIZATION	1
SKIN SENSITIZATION	1
GERM CELL MUTAGENICITY	1B
CARCINOGENICITY	1A
REPRODUCTIVE TOXICITY	1B

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. 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 ON SKIN: Wash with plenty of water. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. 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. If eye irritation persists: Get medical attention. Take off contaminated clothing.

Storage: Store locked up.

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

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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 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. Immediately wash skin thoroughly with soap and water. If symptoms develop and persist, get medical attention. Topical 10 % EDTA ointment can be used to treat chromate scabs and skin ulcers. A 10 % ascorbic acid solution may speed healing if applied promptly. Larger exposures may need additional treatment. 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 immediate 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.
Symptoms:	See Section 11.
Notes to physician:	Treat symptomatically and supportively.

5. FIRE FIGHTING MEASURES

Extinguishing media:	Use media appropriate for surrounding material. Water spray (fog), foam, dry chemical or carbon dioxide.
Special firefighting procedures:	Wear full protective clothing. Wear self-contained breathing apparatus.
Unusual fire or explosion hazards:	If evaporated to dryness, solid residue is an oxidizing agent and may cause spontaneous ignition of combustible materials. May liberate large quantities of dense, foul-smelling smoke which may contain unidentified toxic gasses.

Hazardous combustion products:

Upon decomposition, this product may yield gaseous nitrogen oxides, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. Chromium oxide. Oxides of nitrogen. Oxides of Sodium.

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. Wash thoroughly after handling. Avoid breathing mists or aerosols 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. For industrial use only.

Storage:

For safe storage, store between 5 °C (41°F) and 30 °C (86°F). 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
Sodium borofluoride	2.5 mg/m3 TWA (as F)	2.5 mg/m3 PEL (as F) 2.5 mg/m3 TWA Dust.	None	None
Sodium chromate	0.0005 mg/m3 STEL (as Cr(VI)) Inhalable fraction. 0.0005 mg/m3 STEL (as Cr(VI)) Inhalable fraction. 0.0002 mg/m3 TWA (as Cr(VI)) Inhalable fraction. (SKIN) (as Cr(VI)) Inhalable fraction. (Dermal sensitization) (Respiratory sensitization)	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	0.0005 mg/m3 STEL (as Cr(VI)) Inhalable fraction. 0.0002 mg/m3 TWA (as Cr(VI)) Inhalable fraction. 0.0005 mg/m3 STEL (as Cr(VI)) Inhalable fraction. (SKIN) (as Cr(VI)) Inhalable fraction. (Dermal sensitization) (Respiratory sensitization)	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:

Use chemical resistant, impermeable clothing including gloves and either an apron or body suit to prevent skin 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:

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:

> 93 °C (> 199.4 °F)

Flammable/Explosive limits - lower:	Not applicable
Flammable/Explosive limits - upper:	Not applicable
Autoignition temperature:	Not applicable
Flammability:	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:	None under normal processing.
Hazardous decomposition products:	Upon decomposition, this product may yield oxides of nitrogen and ammonia, carbon dioxide, carbon monoxide and other low molecular weight hydrocarbons. 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:	None identified.

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.
Skin contact:	A component in this product may be harmful or fatal if absorbed through the skin, especially if skin is damaged. 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".
Eye contact:	This product is severely irritating to the eyes.
Ingestion:	Harmful or fatal if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

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 (Rabbit) = 426 mg/kg Dermal LD50 (Rabbit) = 553 mg/kg Dermal LD50 (Rabbit) = 1,600 mg/kg Inhalation LC50 (Rat, 4 h) = 94 mg/m3 Inhalation LC50 (Rat, 4 h) = 263 mg/m3 Inhalation LC50 (Rat, 4 h) = 104 mg/m3 Inhalation LC50 (Rat, 4 h) = 167 mg/m3 Inhalation LC50 (Rat, 4 h) = 200 mg/m3 Inhalation LC50 (Rat, 4 h) = 99 mg/m3 Inhalation LC50 (Rat, 4 h) = 99 mg/m3 Inhalation LC50 (Rat, 4 h) = 217 mg/m3 Inhalation LC50 (Rat, 4 h) = 83 mg/m3	Irritant, Respiratory, Central nervous system, Allergen, Liver, Kidney, Developmental, Reproductive, Corrosive, Carcinogen, Mutagen, Blood
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.
Sodium nitrate	Oral LD50 (Rat) = 1,267 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.	Group 1	Yes

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

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): Sodium bichromate, 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: Sodium chromate (CAS# 7775-11-3).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). 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: This Safety Data Sheet contains changes from the previous version in Section(s): 4, 5, 7, 8, 10, 11

Prepared by: Product Safety and Regulatory Affairs

Issue date: 10/20/2021

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