



Revision Number: 004.5

Issue date: 05/11/2018

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: BONDERITE M-CR 600 AERO known as ALODINE 600
Product type: Conversion coating
Restriction of Use: None identified
Company address: Henkel Corporation
 One Henkel Way
 Rocky Hill, Connecticut 06067

IDH number: 594038

Region: United States

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: 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 RESPIRATORY IRRITATION.
 MAY CAUSE GENETIC DEFECTS.
 MAY CAUSE CANCER.

HAZARD CLASS	HAZARD CATEGORY
OXIDIZING SOLID	2
ACUTE TOXICITY ORAL	3
ACUTE TOXICITY INHALATION	2
ACUTE TOXICITY DERMAL	2
SKIN CORROSION	1B
SERIOUS EYE DAMAGE	1
RESPIRATORY SENSITIZATION	1
SKIN SENSITIZATION	1
GERM CELL MUTAGENICITY	1B
CARCINOGENICITY	1A
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE	3

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.

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	40 - 50
Chromium(VI) oxide	1333-82-0	30 - 40
Dipotassium hexafluorozirconate	16923-95-8	10 - 20

* 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. If symptoms develop and persist, get medical attention.

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.

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.

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.

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

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 personal protective equipment.

Clean-up methods: Spills should be cleaned immediately to prevent dispersion of airborne dusts. Follow all local, state, federal and provincial regulations for disposal.

7. HANDLING AND STORAGE

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

Storage: Store in a cool, dry, well-ventilated area.

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	None	None	None	None
Chromium(VI) oxide	0.05 mg/m ³ TWA (as Cr)	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)	5 mg/m ³ PEL (as Zr)	None	None

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 and face shield.
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:	Solid
Color:	Red-brown
Odor:	Bland
Odor threshold:	Not available.
pH:	1.3 - 1.7 (2% solution)
Vapor pressure:	Not applicable
Boiling point/range:	> 98 °C (> 208.4 °F)
Melting point/ range:	Not determined
Specific gravity:	Not applicable
Vapor density:	Not applicable
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 applicable
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:	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. May liberate hydrogen fluoride.
Incompatible materials:	Avoid contact with organic materials, oils, greases, and any oxidizable materials. This product may react with strong alkalies.
Reactivity:	Not available.
Conditions to avoid:	This product is an OXIDIZING AGENT - avoid contact with organic material.

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. 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. This product is severely irritating to the skin and may cause burns. 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.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Sodium borofluoride	None	Cardiac, Central nervous system, Developmental, Gastrointestinal, Irritant, Kidney, Metabolic, Reproductive
Chromium(VI) oxide	Oral LD50 (Rat) = 25 mg/kg Dermal LD50 (Rabbit) = 30 mg/kg Inhalation LC50 (Rat, 4 h) = 0.087 mg/l	Allergen, Blood, Central nervous system, Corrosive, Carcinogen, 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)
Sodium borofluoride	No	No	No
Chromium(VI) oxide	Known To Be Human Carcinogen.	Group 1	Yes
Dipotassium hexafluorozirconate	No	No	No

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: If discarded, this product is considered a RCRA ignitable waste, D001. This product contains chromium which is a hazardous waste (D007). 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, Zirconium potassium 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

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, Reactive
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: Dipotassium hexafluorozirconate (CAS# 16923-95-8) 1,000 lbs. (454 kg)
Chromium(VI) oxide (CAS# 1333-82-0) 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. 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.

Prepared by: Regulatory Affairs

Issue date: 05/11/2018

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.