



Revision Number: 001.3

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1. PRODUCT AND COMPANY IDENTIFICATION

Product name: BONDERITE M-CR 600 CHROMATE COATING AERO **IDH number:** 2334968

Product type/use: Not available.

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: 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. MAY DAMAGE FERTILITY OR THE UNBORN CHILD. CAUSES DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE.

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

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. 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.

Laundry contaminated clothing before reuse. Discard any shoes or clothing items that cannot be decontaminated. In case of adverse health effects seek medical advice.

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. Attempt immediate administration of a fluoride binding substance: milk, chewable calcium carbonate tablets or 4-8 ounces (120-240 ml) of milk of magnesia or a liquid antacid. Avoid large amounts of liquid as it may induce vomiting. Never give anything by mouth to an unconscious person.
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. Water spray (fog), foam, dry chemical or carbon dioxide.
Special firefighting procedures:	Wear self contained breathing apparatus. Wear protective equipment. Wear self-contained breathing apparatus.
Unusual fire or explosion hazards:	This product is an oxidizing agent and is a serious fire and explosion risk. Do not permit contact with combustible, organic, or other oxidizable materials. May liberate large quantities of dense, foul-smelling smoke which may contain unidentified toxic gasses.
Hazardous combustion products:	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. Oxides of boron. Hydrogen fluoride. Chromium oxide.

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:	Scrape up spilled material and place in a closed 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 dust. 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 10 °C (50°F) and 50 °C (122°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	2.5 mg/m ³ TWA (as F)	2.5 mg/m ³ PEL (as F) 2.5 mg/m ³ TWA Dust.	None	None
Chromium(VI) oxide	0.0005 mg/m ³ STEL (as Cr(VI)) Inhalable fraction. 0.0005 mg/m ³ STEL (as Cr(VI)) Inhalable fraction. 0.0002 mg/m ³ TWA (as Cr(VI)) Inhalable fraction. (SKIN) (as Cr(VI)) Inhalable fraction. 0.003 mg/m ³ TWA (as Cr(III)) Inhalable fraction. (Respiratory sensitization) (Dermal sensitization) (Respiratory sensitization)	0.0025 mg/m ³ OSHA_ACT 0.005 mg/m ³ TWA 0.5 mg/m ³ PEL (as Cr) 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:

Ventilation should effectively remove and prevent buildup of any vapor/mist/fume/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; face shield (if splashing is possible).

Skin protection:

Use chemical resistant, impervious gloves and clothing 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:	Solid
Color:	light brown
Odor:	odourless
Odor threshold:	Not available.
pH:	Not available.
Vapor pressure:	Not available.
Boiling point/range:	Not available.
Melting point/ range:	Not available.
Vapor density:	Not available.
Flash point:	> 260 °C (> 500°F)
Flammable/Explosive limits - lower:	Not available.
Flammable/Explosive limits - upper:	Not available.
Autoignition temperature:	Not available.
Flammability:	Not applicable
Evaporation rate:	Not available.
Solubility in water:	Not available.
Partition coefficient (n-octanol/water):	Not available.
VOC content:	Not available.
Viscosity:	Not available.
Decomposition temperature:	Not available.

10. STABILITY AND REACTIVITY

Stability:	Stable under recommended storage conditions.
Hazardous reactions:	Will not occur.
Hazardous decomposition products:	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. Hydrogen fluoride. Oxides of boron. Chromium oxide.
Incompatible materials:	This product may react with strong reducing agents. Keep away from organic and combustible materials. Strong bases. Metals.
Reactivity:	Not available.
Conditions to avoid:	Keep away from heat, ignition sources and 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. Contains fluorides. Exposure to fluorides over years may cause fluorosis. Inhalation of dusts of this product may cause severe irritation and burns to the respiratory tract.
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". Hydrofluoric acid will penetrate the skin and attack underlying tissue and bone. Large burns (over 25 square inches) may also cause hypocalcemia and other systemic effects which may be fatal.
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. 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. Ingestion of large amounts of this product may result in fluoride poisoning including symptoms of calcification of the ligaments and severe bone changes making normal movements painful, mottling of the teeth, pulmonary fibrosis, anemia, anorexia, dental effects, and possibly death. Contains fluorides. Exposure to fluorides over years may cause fluorosis.

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) = 167 mg/m ³ Inhalation LC50 (Rat, 4 h) = 217 mg/m ³ Inhalation LC50 (Rat, 4 h) = 263 mg/m ³	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.

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 (Chromium trioxide)
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 as active or are exempt from listing on the Toxic Substances Control Act (TSCA) 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)
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 Safety Data Sheet format.

Prepared by: Product Safety and Regulatory Affairs

Issue date: 09/27/2021

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