



Revision Number: 005.0

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1. PRODUCT AND COMPANY IDENTIFICATION

Product name: BONDERITE M-CR 1200S CHROMATE COATING known as #ALODINE 1200S 90
Product type: Conversion coating
Restriction of Use: None identified
Company address: Henkel Corporation
 One Henkel Way
 Rocky Hill, Connecticut 06067

IDH number: 592728

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: MAY INTENSIFY FIRE; OXIDIZER.
 HARMFUL 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 CANCER.

HAZARD CLASS	HAZARD CATEGORY
OXIDIZING SOLID	2
ACUTE TOXICITY ORAL	4
ACUTE TOXICITY INHALATION	2
ACUTE TOXICITY DERMAL	2
SKIN CORROSION	1B
SERIOUS EYE DAMAGE	1
SKIN SENSITIZATION	1
CARCINOGENICITY	1A

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 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, eye protection, and face protection. Use personal protective equipment as required. [In case of inadequate ventilation] wear respiratory protection.

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Response:

If SWALLOWED: Immediately call poison control or physician if you feel unwell. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. IF INHALED: Remove person to fresh air and keep comfortable for breathing. 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. Immediately call a poison control center or physician. If skin irritation or rash occurs: Get medical attention. Wash contaminated clothing before reuse. 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*
Chromium(VI) oxide	1333-82-0	30 - 60
Potassium tetrafluoroborate	14075-53-7	10 - 30
Tripotassium hexacyanoferrate	13746-66-2	10 - 30
Sodium fluoride	7681-49-4	5 - 10
Dipotassium hexafluorozirconate	16923-95-8	5 - 10

* Exact percentage is a 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. 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.

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. Under fire conditions, decomposing material may form a hot, viscous foam. Violent reactions may occur with organic materials or reducing agents. Empty containers retain product residue, so obey hazard warnings and handle empty containers as if they were full.

Hazardous combustion products:

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.

Clean-up methods:

Spills should be cleaned immediately to prevent dispersion of airborne dusts. Do not allow product to enter sewer or waterways. Dispose of according to Federal, State and local governmental regulations.

7. HANDLING AND STORAGE

Handling:

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

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. Store below 110 °F (43.3 °C).

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
Chromium(VI) oxide	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
Potassium tetrafluoroborate	6 mg/m3 STEL Inhalable fraction. 2 mg/m3 TWA Inhalable fraction.	None	None	None
Tripotassium hexacyanoferrate	None	None	None	None
Sodium fluoride	2.5 mg/m3 TWA (as F)	2.5 mg/m3 PEL (as F) 2.5 mg/m3 TWA Dust.	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

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 or a full face shield.
Skin protection:	Chemical resistant, impermeable gloves. The use of butyl rubber gloves is recommended. Use of impervious apron and boots are recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Solid
Color:	orange
Odor:	Bland
Odor threshold:	Not available.
pH:	1.30 - 1.60
Vapor pressure:	Not determined
Boiling point/range:	Not applicable
Melting point/ range:	Not available.
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 applicable
Solubility in water:	Appreciable
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:	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:	Oxidizing agent, may cause spontaneous ignition of combustible materials.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure:	Skin, Inhalation, Eyes
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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. 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
Chromium(VI) oxide	Oral LD50 (Rat) = 25 mg/kg Oral LD50 (Rat) = 29 mg/kg Oral LD50 (Rat) = 135 mg/kg Oral LD50 (Mouse) = 80 mg/kg Oral LD50 (Rat) = 80 mg/kg Dermal LD50 (Rabbit) = 30 mg/kg Inhalation LC50 (Rat, 4 h) = 0.087 mg/l Inhalation LC50 (Rat, 4 h) = 0.137 mg/l	Allergen, Blood, Central nervous system, Corrosive, Carcinogen, Developmental, Eyes, Gastrointestinal, Irritant, Kidney, Liver, Mutagen, Reproductive, Respiratory
Potassium tetrafluoroborate	None	Cardiac, Central nervous system, Developmental, Gastrointestinal, Irritant, Kidney, Metabolic, Reproductive
Tripotassium hexacyanoferrate	None	Cellular
Sodium fluoride	Oral LD50 (Mouse) = 44.3 mg/kg Oral LD50 (Mouse) = 46.0 mg/kg Oral LD50 (Rat) = 32.0 mg/kg Oral LD50 (Rat) = 51.6 mg/kg	Blood, Cardiac, Central nervous system, Corrosive, Gastrointestinal tract, Irritant, Kidney, Metabolic, Muscle, Teeth, Less weight gain and food intake.
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)
Chromium(VI) oxide	Known To Be Human Carcinogen.	Group 1	Yes
Potassium tetrafluoroborate	No	No	No
Tripotassium hexacyanoferrate	No	No	No
Sodium fluoride	No	No	No
Dipotassium hexafluorozirconate	No	No	No

12. ECOLOGICAL INFORMATION

Ecological information: Harmful to aquatic organisms.

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

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, Sodium 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
Marine pollutant: Chromium trioxide

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: Chromium(VI) oxide (CAS# 1333-82-0) 10 lbs. (4.54 kg)
Sodium fluoride (CAS# 7681-49-4) 1,000 lbs. (454 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/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 information added in Section(s): 14

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