

Material Safety Data Sheet

Material Name: BONDERITE® 1402W

ID: 235499

*** Section 1 - Chemical Product and Company Identification ***

Product Trade Name BONDERITE® 1402W

Manufacturer Information

Henkel Technologies
Henkel Corporation
32100 Stephenson Highway
Madison Heights, MI 48071

Contact Phone: (248) 583-9300

Chemtrec Emergency # (800) 424-9300

*** Section 2 - Composition / Information on Ingredients ***

CAS #	Component	Percent
24613-89-6	Chromium(III) chromate	1-10
7631-86-9	Silica, amorphous	1-10

Component Related Regulatory Information

This product may be regulated, have exposure limits or other information identified as the following: Chromium (VI) compounds- water soluble, Chromium (VI) compounds, Chromium compounds, Chromates, Chromium, inorganic compounds.

*** Section 3 - Hazards Identification ***

Emergency Overview:

DANGER -- CORROSIVE! Contact with this material will cause burns to the skin, eyes and mucous membranes. May cause blindness. Contact with broken skin may result in ulcers. Prolonged or repeated breathing may cause ulceration of nasal membranes. Cancer Hazard. Contains material which can cause cancer.

Eye Contact:

This product is severely irritating to the eyes and may cause irreversible damage including burns and blindness.

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.

Skin Absorption:

A component in this product may be harmful or fatal if absorbed through the skin, especially if skin is damaged.

Ingestion:

This product may produce corrosive damage to the gastrointestinal tract if it is swallowed.

Inhalation:

Inhalation of mists of this product may cause severe irritation and burns to the respiratory tract.

Medical Conditions Aggravated by Exposure:

Pre-existing eye, skin and respiratory disorders.

*** Section 4 - First Aid Measures ***

Eye Contact:

In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.

Skin Contact:

Immediately take off all contaminated clothing. 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.

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Ingestion:

If the material is swallowed, get immediate medical attention or advice -- 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.

Inhalation:

If mist or vapor of this product is inhaled, remove person immediately to fresh air. Seek medical attention if symptoms develop or persist.

First Aid: Notes to Physician

Provide general supportive measures and treat symptomatically.

*** Section 5 - Fire Fighting Measures ***

Flash Point: >212 °F

Method Used: Calculated

Flammability Classification: Non-flammable

Upper Flammable Limit (UFL): Not applicable

Lower Flammable Limit (LFL): Not applicable

Fire & Explosion Hazards:

This product is an aqueous mixture which will not burn.

Decomposition Products:

Irritating and toxic gases or fumes may be released during a fire.

Extinguishing Media:

Use any media suitable for the surrounding fires.

Fire-Fighting Instructions:

Firefighters should wear full protective clothing including self contained breathing apparatus.

*** Section 6 - Accidental Release Measures ***

Containment Procedures:

Stop the flow of material, if this is without risk. Wear appropriate protective equipment and clothing during clean-up.

Clean-Up Procedures:

Absorb spill with inert material. Shovel material into appropriate container for disposal. Dispose of collected material according to regulation.

*** Section 7 - Handling and Storage ***

Handling Procedures:

Do not get this material in your eyes, on your skin, or on your clothing. Wash thoroughly after handling. Clothing or other material wet with this product and allowed to dry may become flammable.

Storage Procedures:

Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials. Ship and store above 40° F. Protect from freezing.

*** Section 8 - Exposure Controls / Personal Protection ***

Exposure Guidelines:

A: General Product Information

Follow all applicable exposure limits.

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B: Component Exposure Limits

Chromium(III) chromate (24613-89-6)

ACGIH: 0.05 mg/m³ TWA (as Cr) (related to Chromium (VI) compounds, water-soluble)
OSHA: 2.5 µg/m³ Action Level (as Cr.); 5 µg/m³ TWA (as Cr. Cancer hazard - See 29 CFR 1910.1026) (related to Chromium (VI) compounds)
NIOSH: 0.001 mg/m³ TWA (as Cr) (related to Chromates)

Silica, amorphous (7631-86-9)

NIOSH: 6 mg/m³ TWA

Engineering Controls:

Ventilation should effectively remove and prevent buildup of any vapor or mist generated from the handling of this product.

PERSONAL PROTECTIVE EQUIPMENT

As prescribed in the OSHA Standard for Personal Protective Equipment (29 CFR 1910.132), employers must perform a Hazard Assessment of all workplaces to determine the need for, and selection of, proper protective equipment for each task performed.

Eyes/Face Protective Equipment:

Wear chemical goggles; face shield (if splashing is possible).

Skin Protection:

Use impervious gloves. Gloves should be tested to determine suitability for prolonged contact. Use of impervious apron and boots are recommended.

Respiratory Protection:

If ventilation is not sufficient to effectively prevent buildup of aerosols or vapors, appropriate NIOSH/MSHA respiratory protection must be provided.

Work Practices:

Eyewash fountains and emergency showers are required.

*** Section 9 - Physical & Chemical Properties ***

Physical State: Liquid	Appearance: Dark yellow to brown
Odor: None	Vapor Pressure: Not determined
Vapor Density: Not determined	Boiling Point: >212 °F (>100 °C)
Specific Gravity: 1.11-1.136 @ 60 °F (16 °C)	pH: 2.3-2.5
Viscosity: Not determined	VOC: Not applicable
Solubility Water: Complete	Evaporation Rate: Not determined
Percent Volatile: Not applicable	Percent Solids: 10 - 30%

*** Section 10 - Chemical Stability & Reactivity Information ***

Chemical Stability:

Stable under normal conditions.

Incompatibility:

Avoid contact with organic materials, oils, greases, and any oxidizable materials.

Decomposition Products:

None expected.

Hazardous Polymerization:

Will not occur.

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*** Section 11 - Toxicological Information ***

Acute Toxicity:

A: General Product Information

Industrial exposure to chromium may cause dermatitis, skin ulcers, perforation of the nasal septum, as well as cancers of the lungs, nasal cavity and paranasal sinuses. Chromium III, the naturally occurring form, has low toxicity while chromium VI is highly toxic due to strong oxidation characteristics and permeability through biological membranes. Excessive exposure to chromium VI can produce allergic skin sensitization reactions and severe nasal irritation, scarring and damage to the lungs, liver and kidney damage.

B: Component Analysis - LD50/LC50

Silica, amorphous (7631-86-9)

Oral LD50 Rat: >5000 mg/kg; Dermal LD50 Rabbit: >2000 mg/kg

Carcinogenicity:

A: General Product Information

The International Agency for Research on Cancer (IARC) has found that there is an excessive risk of lung cancer among workers in the chromate producing industry. POSSIBLE CANCER HAZARD: There is laboratory evidence that aqueous sodium dichromate administered directly into the lung, at the highest tolerated dose, over the lifetime of rats, causes a significantly increased incidence of lung cancer. It is expected that if potassium dichromate or chromic acid was tested in this same manner as sodium dichromate, it would give a similar response.

B: Component Carcinogenicity

Chromium(III) chromate (24613-89-6)

ACGIH: A1 - Confirmed Human Carcinogen (related to Chromium (VI) water soluble compounds)

OSHA: Workers exposed to Cr(VI) are at an increased risk of developing lung cancer - see 29 CFR 1910.1026 (related to Chromium (VI) compounds)

NIOSH: potential occupational carcinogen (related to Chromium (VI) compounds)

NTP: Known Carcinogen (related to Chromium hexavalent compounds) (Select Carcinogen)

IARC: Monograph 49 [1990] (evaluated as a group) (related to Chromium (VI) compounds) (Group 1 (carcinogenic to humans))

Chronic Toxicity

Excessive exposure to chromium VI can produce allergic skin sensitization reactions and severe nasal irritation, scarring and damage to the lungs, liver and kidney damage.

Epidemiology:

No information available for the product.

Neurotoxicity:

No information available for the product.

Mutagenicity:

Chromium VI compounds have been mutagenic in bacteria, caused chromosome aberrations in mammalian cells and have been associated with increased frequencies of chromosome aberrations in lymphocytes in chromate workers.

Teratogenicity:

Chromium VI compounds have caused birth defects and affected fertility in laboratory animals.

Other Toxicological Information:

None available.

*** Section 12 - Ecological Information ***

Ecotoxicity:

A: General Product Information

No data available for this product.

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B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Silica, amorphous (7631-86-9)

Test & Species

Test & Species	Conditions
96 Hr LC50 Brachydanio rerio	5000 mg/L [static]
72 Hr EC50 Selenastrum capricornutum	440 mg/L
48 Hr EC50 Ceriodaphnia dubia	7600 mg/L

Environmental Fate:

No data is available concerning the environmental fate, biodegradation or bioconcentration for this product.

*** Section 13 - Disposal Considerations ***

US EPA Waste Numbers & Descriptions:

A: General Product Information

This product, if discarded directly, would be a characteristic RCRA corrosive waste (D002). This product contains chromium which is a hazardous waste (D007).

B: Component Waste Numbers

No EPA Waste Numbers are applicable for this product's components.

Disposal Instructions:

Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

*** Section 14 - Transportation Information ***

US DOT Information

Shipping Name: Please refer to the container label for transportation information.

*** Section 15 - Regulatory Information ***

US Federal Regulations

A: General Product Information

This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

B: Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Chromium(III) chromate (24613-89-6)

SARA 313: 0.1 % de minimis concentration (except for chromite ore mined in the Transvaal Region of South Africa and the unreacted ore component of the chromite ore processing residue (COPR). Chemical Category N090) (related to Chromium (VI) compounds)

SARA 311/312: Acute: Yes Chronic: Yes Fire: No Pressure: No Reactive: No

State Regulations

A: General Product Information

No additional information available.

B: Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS #	CA	FL	MA	MN	NJ	PA
Chromium(III) chromate (related to Chromium compounds) (related to Chromium (VI))	24613-89-6	Yes ¹	No	Yes	Yes ²	Yes ¹	Yes ²
Silica, amorphous	7631-86-9	Yes	No	Yes	Yes	Yes	Yes

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

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WARNING! This product contains a chemical known to the state of California to cause cancer.

Other Regulations

A: General Product Information

All components are on the U.S. EPA TSCA Inventory List.

B: Component Analysis - Inventory

Component	CAS #	TSCA	DSL	EINECS
Chromium(III) chromate	24613-89-6	Yes	Yes	Yes
Silica, amorphous	7631-86-9	Yes	Yes	Yes

C: Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Chromium(III) chromate	24613-89-6	0.1 %
Silica, amorphous	7631-86-9	1 %

*** Section 16 - Other Information ***

NFPA Ratings: Health: 3 Fire: 0 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

HMIS Ratings: Health: 3* Fire: 0 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; NFPA = National Fire Protection Association; HMIS = Hazardous Material Identification System; CERCLA = Comprehensive Environmental Response, Compensation and Liability Act; SARA = Superfund Amendments and Reauthorization Act

The information presented herein is believed to be factual as it has been derived from the works and opinions of persons believed to be qualified experts; however, nothing contained in this information is to be taken as a warranty or representation for which Henkel Surface Technologies bears legal responsibility. The user should review any recommendations in the specific context of the intended use to determine whether they are appropriate.

Contact: Product Safety and Regulatory Affairs

Contact Phone: (248) 583-9300

This is the end of MSDS # 235499