Material Safety Data Sheet

Material Name: ALODINE® 1201 **ID: 235110**

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

Product Trade Name ALODINE® 1201

Manufacturer Information

Henkel Surface 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
7738-94-5	Chromic acid	<1
7664-39-3	Hydrofluoric Acid	<1
13746-66-2	Potassium ferricyanide	<1

Component Related Regulatory Information

This product may be regulated, have exposure limits or other information identified as the following: Fluorides (16984-48-8), Chromium (VI) compounds- water soluble, (RR-00026-0), (18540-29-9).

* * * 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. Following skin exposure to this product, the sensation of irritation or pain may be delayed. 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. Following skin exposure to this product, the sensation of irritation or pain may be delayed.

Skin Absorption:

A component in this product may be 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. Flush with large amounts of water. Soak the affected area for one hour in an iced solution (0.13%) of Zephiran chloride (30 cc of 17% concentrate per gallon of iced distilled water.) GET MEDICAL ATTENTION IMMEDIATELY.

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. If inhaled, immediately remove the affected person to fresh air.

First Aid: 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.

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

Flash Point:	Not applicable	**Method Used:**	Not applicable	**Flammability Classification:**	Non-flammable
Upper Flammable Limit (UFL):	Not applicable	**Lower Flammable Limit (LFL):**	Not applicable		

Fire & Explosion Hazards:

If evaporated to dryness, solid residue is an oxidizing agent and may cause spontaneous ignition of combustible materials.

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. Do not inhale vapors or mists of this product. Wash thoroughly after handling. For industrial use only. 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.

Manufacturer recommends storing above 40 ºF. Thaw and mix thoroughly if frozen.

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

Exposure Guidelines:

A: General Product Information

Follow all applicable exposure limits.

B: Component Exposure Limits

Hydrofluoric Acid (7664-39-3)

ACGIH: 3 ppm Ceiling (as F)
OSHA: 3 ppm TWA
6 ppm STEL (as F)
NIOSH: 3 ppm TWA; 2.5 mg/m3 TWA
6 ppm Ceiling (15 min); 5 mg/m3 Ceiling (15 min)

Chromic acid (7738-94-5)

ACGIH: 0.05 mg/m3 TWA (as Cr) (related to Chromium (VI) compounds, water-soluble)
OSHA: 0.1 mg/m3 Ceiling (and chromates)

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:

Eyewash fountains and emergency showers are required.

Skin Protection:

Use impervious gloves. Use of impervious apron and boots are recommended.

Respiratory Protection:

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

Work Practices:

Eye wash fountain and emergency showers are recommended.

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

Physical State:	Liquid	**Appearance:**	Orange
Odor:	None	**Vapor Pressure:**	Not applicable
Vapor Density:	Not applicable	**Boiling Point:**	>212 º F (100 º C)
Specific Gravity:	1.0-1.1	**pH:**	<2
Viscosity:	Not applicable	**VOC:**	Not applicable
Solubility Water:	Complete	**Evaporation Rate:**	Not determined
Percent Volatile:	Not applicable	**Percent Solids:**	<2%

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

Chemical Stability:

Stable under normal conditions.

Conditions to Avoid:

None expected.

Incompatibility:

Avoid contact with organic materials, oils, greases, and any oxidizable materials. This product may react with strong alkalies.

Decomposition Products:

May liberate hydrogen fluoride. When heated to decomposition or on contact with strong acids potassium ferricyanide may emit fumes of cyanide.

Hazardous Polymerization:

Will not occur.

* * * 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.

B: Component Analysis - LD50/LC50

Potassium ferricyanide (13746-66-2)
Oral LD50 Mouse: 2970 mg/kg

Hydrofluoric Acid (7664-39-3)
Inhalation LC50 Rat: 1276 mg/kg/1H; Inhalation LC50 Mouse: 342 mg/kg/1H

Carcinogenicity:

A: General Product Information

No information available for the product.

B: Component Carcinogenicity

Hydrofluoric Acid (7664-39-3)
ACGIH: A4 - Not Classifiable as a Human Carcinogen (as F) (related to Fluorides)

Chromic acid (7738-94-5)
ACGIH: A1 - Confirmed Human Carcinogen (related to Chromium (VI) water soluble compounds)

Chronic Toxicity

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.

Contains fluorides. Exposure to fluorides over years may cause fluorosis.

Epidemiology:

No information available for the product.

Neurotoxicity:

No information available for the product.

Mutagenicity:

No information available for the product.

Teratogenicity:

No information available for the product.

Other Toxicological Information:

None available.

* * * Section 12 - Ecological Information * * *

Ecotoxicity:

A: General Product Information

No data available for this product.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

No ecotoxicity data are available for this product's components.

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

Hydrofluoric Acid (7664-39-3)

RCRA: waste number U134 (Corrosive waste, Toxic waste)

Disposal Instructions:

Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations. Neutralize the spilled material before disposal.

* * * 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).

Hydrofluoric Acid (7664-39-3)

SARA 302: 100 lb TPQ
CERCLA: 100 lb final RQ; 45.4 kg final RQ

Chromic acid (7738-94-5)

CERCLA: 10 lb final RQ; 4.54 kg final RQ

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
Hydrofluoric Acid	7664-39-3	Yes	No	Yes	Yes	Yes	Yes
Chromic acid	7738-94-5	No	No	Yes	Yes	Yes	Yes

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
Potassium ferricyanide	13746-66-2	Yes	Yes	Yes
Hydrofluoric Acid	7664-39-3	Yes	Yes	Yes
Chromic acid	7738-94-5	Yes	Yes	Yes

C: Component Analysis - WHMIS IDL

No components are listed in the WHMIS IDL.

* * * 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.

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This is the end of MSDS # 235110