

Material Safety Data Sheet

Material Name: ALODINE® 1200S

ID: 234116

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

Product Trade Name ALODINE® 1200S

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
1333-82-0	Chromic acid, dry	30-60
13746-66-2	Potassium ferricyanide	10-30
14075-53-7	Potassium fluoborate	10-30
7681-49-4	Sodium fluoride	1-10
16923-95-8	Potassium fluozirconate	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, inorganic compounds, Chromium (VI) compounds, Chromium (VI) (18540-29-9), Chromic acid (7738-94-5), Fluorides (16984-48-8), Zirconium compounds, n.o.s.

*** Section 3 - Hazards Identification ***

Emergency Overview:

DANGER -- CORROSIVE! OXIDIZER! 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. Possible cancer hazard.

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 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. Ingestion of small amounts of this product may result in potentially fatal hypocalcemia and systemic toxicity.

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.

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.

Material Safety Data Sheet

Material Name: ALODINE® 1200S

ID: 234116

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.

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 inhaled, immediately remove the affected person to fresh air. Call a physician if symptoms develop or persist.

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:

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 (liquid and/or vapor) and can be dangerous.

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:

Spills should be cleaned immediately to prevent dispersion of airborne dusts. Do not allow the spilled product to enter public drainage system or open water courses. Follow all Local, State, Federal and Provincial regulations for disposal.

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

Handling Procedures:

Do not get this material in your eyes, on your skin, or on your clothing. Do not breathe dust from this material. Wash thoroughly after handling. For industrial use only.

Material Safety Data Sheet

Material Name: ALODINE® 1200S

ID: 234116

Oxidizing agent, may cause spontaneous ignition of combustible materials.

Storage Procedures:

Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials.

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

Exposure Guidelines:

A: General Product Information

Follow all applicable exposure limits.

B: Component Exposure Limits

Chromic acid, dry (1333-82-0)

ACGIH: 0.05 mg/m³ TWA (related to Chromium (VI) compounds - water soluble)

0.5 mg/m³ TWA (related to Chromium, inorganic compounds)

OSHA: Chromic acid and chromates: C 0.1 mg/m³ (related to Chromic acid)

NIOSH: as CrO₃: 0.001 mg/m³ TWA; NIOSH Potential Occupational Carcinogen - see Appendix A; see Appendix C for supplementary exposure limits

as CrO₃: 0.001 mg/m³ TWA; NIOSH Potential Occupational Carcinogen - see Appendix A; see Appendix C for supplementary exposure limits (related to Chromic acid)

Potassium fluoborate (14075-53-7)

ACGIH: 2.5 mg/m³ TWA (as F) (related to Fluorides)

OSHA: as F: 2.5 mg/m³ TWA (related to Fluorides)

NIOSH: as F: 2.5 mg/m³ TWA (related to Fluorides)

Potassium fluozirconate (16923-95-8)

ACGIH: 5 mg/m³ TWA (as Zr) (related to Zirconium compounds, n.o.s.)

10 mg/m³ STEL (as Zr) (related to Zirconium compounds)

OSHA: as Zr: 5 mg/m³ TWA (related to Zirconium compounds, n.o.s.)

as Zr: 10 mg/m³ STEL (related to Zirconium compounds, n.o.s.)

NIOSH: as F: 2.5 mg/m³ TWA (related to Fluorides)

Sodium fluoride (7681-49-4)

NIOSH: as F: 2.5 mg/m³ TWA

Engineering Controls:

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

PERSONAL PROTECTIVE EQUIPMENT

Eyes/Face Protective Equipment:

Wear chemical goggles or a full face shield.

Skin Protection:

Use impervious gloves. The use of butyl rubber gloves is recommended. 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.

Personal Protective Equipment:

Eye wash fountain and emergency showers are recommended.

Material Safety Data Sheet

Material Name: ALODINE® 1200S

ID: 234116

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

Physical State: Powder / Crystals	Appearance: Orange
Odor: Bland	Vapor Pressure: Not applicable
Vapor Density: Not applicable	Boiling Point: Not applicable
Specific Gravity: Not applicable	pH: Not applicable
Viscosity: Not applicable	VOC: Not applicable
Solubility Water: Appreciable	Evaporation Rate: Not applicable
Percent Volatile: Not applicable	Percent Solids: 100

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

Chemical Stability:

Stable under normal conditions.

Conditions to Avoid:

Oxidizing agent, may cause spontaneous ignition of combustible materials.

Incompatibility:

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

Decomposition Products:

May liberate hydrogen fluoride.

Hazardous Polymerization:

Will not occur.

*** Section 11 - Toxicological Information ***

Acute Toxicity:

A: General Product Information

No information available for the product.

B: Component Analysis - LD50/LC50

Chromic acid, dry (1333-82-0)

Oral LD50 Rat : 80 mg/kg

Oral LD50 Mouse : 127 mg/kg

Potassium ferricyanide (13746-66-2)

Oral LD50 Mouse : 2970 mg/kg

Potassium fluozirconate (16923-95-8)

Oral LD50 Mouse : 98 mg/kg

Sodium fluoride (7681-49-4)

Oral LD50 Rat : 52 mg/kg

Oral LD50 Mouse : 57 mg/kg

Carcinogenicity:

A: General Product Information

No information available for the product.

Material Safety Data Sheet

Material Name: ALODINE® 1200S

ID: 234116

B: Component Carcinogenicity

Chromic acid, dry (1333-82-0)

- ACGIH: A1 - confirmed human carcinogen (related to Chromium (VI) compounds - water soluble)
A4 - not classifiable as a human carcinogen (related to Chromium, inorganic compounds)
- NIOSH: occupational carcinogen
occupational carcinogen (related to Chromic acid)
- NTP: Known Carcinogen; (under Chromium VI Compounds)
Known Carcinogen (related to Chromium (VI) compounds) (Select Carcinogen)
- IARC: Monograph 49, 1990; (Evaluated as a group) (related to Chromium (VI) compounds)
Monograph 49, 1990; (Evaluated as a group) (related to Chromium (VI)) (Group 1 (carcinogenic to humans))

Potassium fluoborate (14075-53-7)

- ACGIH: A4 - Not Classifiable as a Human Carcinogen (as F) (related to Fluorides)

Potassium fluozirconate (16923-95-8)

- ACGIH: A4 - Not Classifiable as a Human Carcinogen (related to Zirconium compounds, n.o.s.)

Chronic Toxicity

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

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.

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

Chromic acid, dry (1333-82-0)

Test & Species

LC50 (96 hr) fathead minnow	36.2 mg/L.
LC50 (96 hr) striped catfish	200 mg/L.
LC50 (96 hr) rainbow trout	7600 ug/L

Conditions

: water pH = 7.0 (related to Chromium (VI))

Sodium fluoride (7681-49-4)

Test & Species

LC50 (48 hr) water flea	340 mg/L.
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Conditions

Material Safety Data Sheet

Material Name: ALODINE® 1200S

ID: 234116

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 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.
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).

Chromic acid, dry (1333-82-0)

SARA 313: form R reporting required for 0.1% de minimis concentration; Chemical Category N090 (related to Chromium (VI) compounds)

CERCLA: final RQ = 10 pounds (4.54 kg) (related to Chromic acid)

Potassium fluozirconate (16923-95-8)

CERCLA: final RQ = 1000 pounds (454 kg)

Sodium fluoride (7681-49-4)

CERCLA: final RQ = 1000 pounds (454 kg)

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

State Regulations

A: General Product Information

No additional information available.

Material Safety Data Sheet

Material Name: ALODINE® 1200S

ID: 234116

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
Chromic acid, dry (¹ related to Chromic acid) (² related to Chromium (VI))	1333-82-0	No	Yes¹	Yes¹	Yes²	Yes¹	Yes²
Potassium fluoborate (¹ related to Fluoride) (² related to Fluorides)	14075-53-7	Yes¹	No	No	Yes²	No	Yes¹
Potassium fluozirconate (¹ related to Zirconium compounds, n.o.s.)	16923-95-8	Yes	No	Yes	Yes¹	Yes	Yes
Sodium fluoride	7681-49-4	Yes	Yes	Yes	No	Yes	Yes

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

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
Chromic acid, dry	1333-82-0	Yes	Yes	Yes
Potassium ferricyanide	13746-66-2	Yes	Yes	Yes
Potassium fluoborate	14075-53-7	Yes	Yes	Yes
Potassium fluozirconate	16923-95-8	Yes	Yes	Yes
Sodium fluoride	7681-49-4	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
Chromic acid, dry	1333-82-0	0.1% item 401 (1305) ~1% item 398 (560) (related to Chromium (VI) compounds, n.o.s.) ~1% item 391 (79) (related to Chromic acid (H ₂ CrO ₄))
Potassium fluozirconate	16923-95-8	1% item 1734 (900)
Sodium fluoride	7681-49-4	1% item 1440 (910)

*** Section 16 - Other Information ***

NFPA Ratings: Health: 3 Fire: 0 Reactivity: 1 Other: OX

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

HMIS Ratings: Health: 3* Fire: 0 Reactivity: 1 Pers. Prot.:

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

Material Safety Data Sheet

Material Name: ALODINE® 1200S

ID: 234116

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 # 234116