

# Material Safety Data Sheet

Material Name: ALODINE® 1001

ID: 235107

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

Product Trade Name ALODINE® 1001

### 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
Proprietary	Zirconium fluoride compound	<1

### Component Related Regulatory Information

This product may be regulated, have exposure limits or other information identified as the following: Chromium (VI) (18540-29-9), Chromium (VI) compounds- water soluble, Chromium (VI) compounds, Chromium compounds, Chromium, inorganic compounds, Zirconium compounds, n.o.s., Fluorides.

## \*\*\* Section 3 - Hazards Identification \*\*\*

### Emergency Overview:

WARNING! This product is irritating to the eyes, respiratory system and skin. Cancer Hazard. Contains material which can cause cancer.

### Eye Contact:

This product may be severely irritating to the eyes.

### Skin Contact:

This product may cause irritation to the skin. Product contains chromium, which may cause an allergic skin sensitization reaction. Liquid or vapor can cause fluoride-type irritation or burns which may not be immediately painful or visible.

### Skin Absorption:

A component in this product may be absorbed through the skin in harmful amounts.

### Ingestion:

This product may be harmful if it is swallowed.

### Inhalation:

Inhalation of mists 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.

### 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.

# Material Safety Data Sheet

Material Name: ALODINE® 1001

ID: 235107

## 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

Treatment of hypocalcemia associated with fluoride 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:

This product is an aqueous mixture which will not burn. 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. Block any potential routes to water systems.

## 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. Protect from freezing.

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

## Exposure Guidelines:

### A: General Product Information

Follow all applicable exposure limits.

# Material Safety Data Sheet

Material Name: ALODINE® 1001

ID: 235107

## B: Component Exposure Limits

### Chromic acid (7738-94-5)

ACGIH: 0.05 mg/m<sup>3</sup> TWA (as Cr) (related to Chromium (VI) compounds, water-soluble)  
OSHA: 2.5 µg/m<sup>3</sup> Action Level; 5 µg/m<sup>3</sup> TWA (Cancer hazard - See 29 CFR 1910.1026) (related to Chromium (VI))

### Zirconium fluoride compound (Proprietary)

ACGIH: 5 mg/m<sup>3</sup> TWA (as Zr) (related to Zirconium compounds)  
10 mg/m<sup>3</sup> STEL (as Zr) (related to Zirconium compounds)  
OSHA: 5 mg/m<sup>3</sup> TWA (as Zr) (related to Zirconium compounds)  
10 mg/m<sup>3</sup> STEL (as Zr) (related to Zirconium compounds, n.o.s.)  
NIOSH: 5 mg/m<sup>3</sup> TWA (as Zr, except Zirconium tetrachloride) (related to Zirconium compounds)  
10 mg/m<sup>3</sup> STEL (as Zr, except Zirconium tetrachloride) (related to Zirconium compounds)

## 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 mists, 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:	Clear orange
Odor:	None	Vapor Pressure:	Not applicable
Vapor Density:	Not applicable	Boiling Point:	212 °F (100 °C)
Specific Gravity:	1.00-1.01	pH:	2 - 3
Viscosity:	Not applicable	VOC:	Not applicable
Solubility Water:	Complete	Evaporation Rate:	Not determined
Percent Volatile:	Not applicable	Percent Solids:	<5

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

### Chemical Stability:

Stable under normal conditions.

### 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.

# Material Safety Data Sheet

Material Name: ALODINE® 1001

ID: 235107

## Hazardous Polymerization:

Will not occur.

## \*\*\* Section 11 - Toxicological Information \*\*\*

### Acute Toxicity:

#### A: General Product Information

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

Zirconium fluoride compound (Proprietary)

Oral LD50 Mouse: 98 mg/kg

### Carcinogenicity:

#### 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 Carcinogenicity

##### Chromic acid (7738-94-5)

- 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))
- 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)) (Group 1 (carcinogenic to humans))

##### Zirconium fluoride compound (Proprietary)

- ACGIH: A4 - Not Classifiable as a Human Carcinogen (related to Zirconium compounds)

### Chronic Toxicity

Chronic fluoride exposure can produce fluorosis, a condition characterized by nausea, vomiting, loss of appetite, diarrhea or constipation, anemia, weakness, and joint stiffness.

### 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.

# Material Safety Data Sheet

Material Name: ALODINE® 1001

ID: 235107

## B: Component Analysis - Ecotoxicity - Aquatic Toxicity

### Chromic acid (7738-94-5)

#### Test & Species

96 Hr LC50 Pimephales promelas	36.2 mg/L
96 Hr LC50 Oncorhynchus mykiss	7.6 mg/L
24 Hr EC50 water flea	435 µg/L

#### Conditions

related to Chromium (VI)  
related to Chromium (VI)

## 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.

### \*\*\* 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 (7738-94-5)

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)

CERCLA: 10 lb final RQ; 4.54 kg final RQ

#### Zirconium fluoride compound (Proprietary)

CERCLA: 1000 lb final RQ; 454 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.

# Material Safety Data Sheet

Material Name: ALODINE® 1001

ID: 235107

## 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 (*related to Chromium compounds)	7738-94-5	Yes <sup>1</sup>	No	Yes	Yes	Yes	Yes
Zirconium fluoride compound (*related to Zirconium compounds)	Proprietary	Yes	No	Yes	Yes <sup>1</sup>	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	7738-94-5	Yes	Yes	Yes
Zirconium fluoride compound	Proprietary	Yes	Yes	Yes

### C: Component Analysis - WHMIS IDL

No components are listed in the WHMIS IDL.

## \*\*\* Section 16 - Other Information \*\*\*

NFPA Ratings: Health: 2 Fire: 0 Reactivity: 0

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

HMIS Ratings: Health: 2\* 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 # 235107