

Recvd Nov 2001

**ARMOUR PRODUCTS**  
**MATERIAL SAFETY DATA SHEET**  
**ARMOUR ETCH CREAM**

411628 / 744-600  
236103 / 744-611  
236106 / 744-612

**SECTION I: CHEMICAL PRODUCTS AND COMPANY IDENTIFICATION**

Common Name : NOT APPLICABLE  
Chemical Name : CHEMICAL MIXTURE  
Formula : CHEMICAL MIXTURE  
Product CAS No. : CHEMICAL MIXTURE  
Product Use : FROSTING GLASS AND GLASSWARE

Supplier : ARMOUR PRODUCTS INC.  
Address : P. O. BOX 128  
City, ST, Zip : WYCKOFF, NJ 07481  
Phone : 1-201-847-0404

83331

**FOR CHEMICAL EMERGENCY CALL CHEMTREC (24 HOURS)**  
1-800-424-9300 (US, Canada, Puerto Rico, Virgin Islands)  
1-202-483-7616 (Outside Above Area)

**SECTION II: COMPOSITION/INFORMATION ON INGREDIENTS**

INGREDIENT	CAS NO.	% Wt.
FLUORIDE COMPOUNDS, INORGANIC	IN TSCA	30 - 60
TITANIUM DIOXIDE	13463-67-7	1 - 5
CITRIC ACID	77-92-9	10-30

NOTE: See Section VIII for Exposure Limits and Section XI for Toxicological Information.

**SECTION III: HAZARD IDENTIFICATION**

**EMERGENCY OVERVIEW**

Pungent tan paste  
Flash Point: > 100°C  
May be fatal if swallowed.  
Causes eye and skin burns.  
May cause respiratory tract irritation.  
Not a fire or explosive hazard, however, upon contact with most metals, flammable hydrogen gas will be emitted.

**ROUTES OF ENTRY**

Eyes? YES      Skin? YES      Inhalation? YES      Ingestion? YES

**POTENTIAL HEALTH EFFECTS**

**EYE CONTACT** may cause severe irritation with possible corneal burns.  
**SKIN CONTACT** causes severe burns and fluoride-like burns which may not be immediately evident.  
**INHALATION** may cause irritation to respiratory tract and lung damage if exposure is excessive.  
**INGESTION** can cause serious damage to the mouth, esophagus, stomach, and other tissues with which contact is made. Ingestion may be fatal.

**CARCINOGENICITY**

NTP? NO

IARC? NO

OSHA? NO

**CHRONIC HEALTH HAZARDS**

Exposure to FLUORIDES over years may produce mottling of tooth enamel, embrittlement and decalcification of bones, and increased calcification of ligaments and vertebrae resulting in spinal stiffness (fluorosis).

Repeated exposure may cause dental erosion, jaw necrosis, nasal ulceration, asthma, bronchitis, and other respiratory ailments.

**MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE**

May aggravate existing medical conditions such as allergies, dermatitis, asthma, bronchitis or any other respiratory ailment.

**NOTE:** See Section VIII for Exposure Limits, Section XI for Toxicological Information and Section X for Ecological Information.

**SECTION IV: FIRST AID MEASURES**

**EYE CONTACT:** Immediately flush eyes with plenty of water for at least 15 minutes. Hold eyelids open during this flushing with water. Call a physician immediately.

**SKIN CONTACT:** Flush area with water while removing contaminated clothing and shoes. Follow by washing with soap and water. Do not reuse clothing or shoes until cleaned. If irritation persists, get medical attention. Do not apply oils or ointments unless ordered by physician.

**INHALATION:** Remove to fresh air. If breathing is difficult, give oxygen. Call a physician.

**INGESTION:** If conscious, drink a quart of water. DO NOT induce vomiting. Call a physician immediately. If unconscious or in convulsions, take immediately to a hospital or physician. Never induce vomiting or give anything by mouth to an unconscious person.

**SECTION V: FIRE-FIGHTING MEASURES**

Flash Point: >100°C

Auto-ignition: Not Determined

LEL: Not Determined

JEL: Not Determined

**NFPA HAZARD CLASSIFICATION**

Health: 3

Flammable: 0

Reactivity: 0

**HMIS HAZARD CLASSIFICATION**

Health: 3\*

Flammable: 0

Reactivity: 0

**EXTINGUISHING MEDIA**

Use water, foam or dry chemical.

**SPECIAL FIRE FIGHTING PROCEDURES**

Wear NIOSH/MSHA approved positive-pressure self-contained breathing apparatus and protective clothing as specified in 29 CFR 1910.156.

**UNUSUAL FIRE AND EXPLOSION HAZARDS**

Not a fire or explosion hazard, however, upon contact with most metals, flammable hydrogen gas will be emitted.

**SECTION VI: ACCIDENTAL RELEASE MEASURES**

Contain spillage; soak up with inert absorbent and scoop into container for disposal. Notification of the National Response Center (800-424-8002) may be required. Refer to EPA, DOT and applicable state and local regulations for current response information.

It is recommended that each user establish a spill prevention, control and countermeasure plan (SPCC). Such a plan should include procedures applicable to proper storage, control and clean up of spills, including reuse or disposal as appropriate (see Section XI: Disposal Considerations).

**\*\*NOTE\*\*** In the event of an accidental release of this material, the above procedures should be followed. Additionally, proper exposure controls and personal protective equipment should be utilized (see Section VIII: Exposure Control/ Personal Protection) and disposal of the material should be in accordance with Section XI: Disposal Considerations.

**SECTION VII: HANDLING AND STORAGE**

Keep container closed.

Store in a cool, dry location.

Use with adequate ventilation.

Do not breathe vapors or mists.

Avoid contact with eyes, skin and clothing.

Provide a safety shower and eyewash close to where this material is being used.

All personal protective equipment, tools, etc., should be neutralized thoroughly with sodium carbonate or dilute ammonia after each use. Check gloves DAILY for pinhole leaks. Discard defective gloves. Never touch outer surfaces of gloves after use. Wash contaminated clothing before reuse. Destroy contaminated shoes.

**SECTION VIII: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**EXPOSURE LIMITS**

INGREDIENT	PEL-OSHA	TLV-ACGIH
FLUORIDE COMPOUNDS, INORGANIC CAS NO: IN TSCA	2.5 mg/m <sup>3</sup> (as F)	2.5 mg/m <sup>3</sup> (as F)
TITANIUM DIOXIDE CAS NO: 13463-67-7	10 mg/m <sup>3</sup> (Total Dust) 5 mg/m <sup>3</sup> (Respirable)	10 mg/m <sup>3</sup>

Not all TLVs/PELs may be applicable since the material is a paste. Unless otherwise noted, all values are reported as 8-hour Time-Weighted Averages (TWAs) and total dust (particulates only). All ACGIH TLVs refer to the 1995-96 Values. All OSHA PELs refer to 29 CFR Part 1910 Air Contaminants: Final Rule, January 19, 1989. NOTE: As a result of the July 7, 1992 decision by the U.S. Circuit Court of Appeals (AFL-CIO vs. OSHA) to vacate the 1989 PELs, OSHA will no longer enforce these new limits and will return to the pre-1989 PELs. Armour Products Inc., however, will continue to list the more protective 1989 levels.

**RESPIRATORY PROTECTION**

A NIOSH/MSHA-approved respirator as necessary.

**VENTILATION**

General, local exhaust ventilation as necessary to control any air contaminants to within their PELs or TLVs during the use of this product.

**PROTECTIVE EQUIPMENT**

Chemical goggles: Full face shield if needed.  
 Rubber or neoprene gloves.  
 Body protection as necessary to prevent skin contact.

**PERSONAL SAMPLING PROCEDURES**

For FLUORIDE COMPOUNDS: Refer to NIOSH Manual of Analytical Methods, 3rd Edition, Volume 1, Method 7902.

**SECTION IX: PHYSICAL AND CHEMICAL PROPERTIES**

Boiling Point: Not Determined  
 Specific Gravity: (H<sub>2</sub>O = 1): Not Determined  
 Melting Point: Not Determined  
 Vapor Pressure (mm Hg): Not Determined  
 Vapor Density (Air = 1): Not Determined  
 Evaporation Rate (Butyl Acetate = 1): Not Determined  
 % Solubility in Water: Soluble  
 Appearance: Tan paste  
 Odor: Pungent  
 pH: < 1

**SECTION X: STABILITY AND REACTIVITY**

**STABILITY**

Generally considered stable.  
 Avoid: None expected.

**INCOMPATIBILITIES (Materials to Avoid)**

Carbides, chlorates, cyanides, metal powders, nitrates.

**HAZARDOUS DECOMPOSITION OR BY-PRODUCTS**

Hydrogen fluoride.

**POLYMERIZATION**

Polymerization is not expected to occur.  
 Avoid: Not applicable.

**SECTION XI: TOXICOLOGICAL INFORMATION**

**CHEMICAL NAME**

FLUORIDE COMPOUNDS, INORGANIC  
 CAS NO: In TSCA

**LD<sub>50</sub>**  
 Not Available

**LC<sub>50</sub>**  
 185 ppm/1hr (as F), RAT

TITANIUM DIOXIDE  
 CAS NO: 13463-67-7

Not Available

Not Available

CITRIC ACID  
 CAS NO: 77-92-9

5040 mg/Kg, oral, MOUSE

Not Available

NOTE: See Sections III, VIII and XII for additional information.

**SECTION XII: ECOLOGICAL INFORMATION****ECOTOXICITY**

No data available.

**ENVIRONMENTAL FATE**

No data available.

**SECTION XIII: DISPOSAL CONSIDERATIONS**

US EPA Waste Number: D002

Federal, state and local disposal laws and regulations will determine the proper waste disposal/recycling/reclamation procedure. All waste materials should be reviewed to determine the applicable hazards (testing may be necessary). Any material classified as a DOT Corrosive or any waste solutions with a pH of  $\leq 2$  or  $\geq 12.5$  are hazardous wastes under US EPA hazardous waste regulations. Disposal requirements are dependent on the hazard classification and will vary by location and the type of disposal selected.

**\*\*NOTE\*\*** Chemical additions, processing or otherwise altering this material may make the waste management information presented above incomplete, inaccurate or otherwise inappropriate.

As local regulations may vary, all waste must be disposed/recycled/reclaimed in accordance with applicable federal, state and local environmental control regulations.

**SECTION XIV: TRANSPORTATION INFORMATION****INTERNATIONAL**

UN Number: 3260

**UNITED STATES**

EPA Waste Number: D002

DOT Classification: CLASS 8 - Corrosive Materials

DOT Proper Shipping Name: CORROSIVE SOLID, ACIDIC, INORGANIC N.O.S. (Fluorides and Citric Acid)

**CANADA**

PIN Number: 3260

TDG Class: Corrosive

**EC**

DGL Class: Corrosive

**SECTION XV: REGULATION INFORMATION****US FEDERAL REGULATIONS**

TSCA: IN TSCA

**SARA 311 AND 312 HAZARD CATEGORIES**

IMMEDIATE (Acute) Health Hazard: YES

DELAYED (Chronic) Health Hazard: YES

FIRE Hazard: NO

REACTIVITY Hazard: NO

Sudden Release of PRESSURE: NO

**SARA SECTION 313 NOTIFICATION**

This product does not contain toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

**OZONE DEPLETING SUBSTANCES (ODS)**

This product neither contains nor is manufactured with an ozone depleting substance subject to the labeling requirements of the Clean Air Act Amendments 1990 and 40 CFR Part 82.

**VOLATILE ORGANIC COMPOUNDS (VOC)**

Not Determined

**US STATE REGULATIONS**

VOLATILE ORGANIC COMPOUND (CARB): Not Determined

**CANADIAN REGULATIONS**

DSL/NDSL: Domestic Substance List

WHMIS Classification: Class E - CORROSIVE MATERIAL

**EUROPEAN REGULATIONS**

EINECS: On EINECS European Inventory

**OTHER REGULATIONS**

MITI: Not on MITI ENCS Japan List

AICS: On AICS Australian Inventory

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**SECTION XVI: OTHER INFORMATION**

**REVISIONS**

Revision Number: 2

This MSDS has been revised in the following section(s):

**PREPARATION INFORMATION**

Prepared By: WJS Associates Inc., PO Box 129, Pequannock, NJ 07440

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The information in this Material Safety Data Sheet should be provided to all who will use, handle, store, transport, or otherwise be exposed to this product. This information has been prepared for the guidance of plant engineering, operations, and management and for persons working with or handling this product. The information presented in the MSDS is premised upon proper handling and anticipated uses and is for the material without chemical additions/alterations. We believe this information to be reliable and up-to-date as of the date of publication, but make no warranty that it is. Additionally, if this Material Safety Data Sheet is more than three years old, please contact ARMOUR PRODUCTS at the phone number listed in SECTION I to make certain that this sheet is current.

END OF MSDS.....