



# SAFETY DATA SHEET

Supersedes Date: 13 Feb 2023

Revision Date: 13 Feb 2023

Version: 1.0

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

### Product identifier

**Product Label Name** Rust Remover (Rust Eraser)  
**Other means of identification**  
**UPC Code(s)** Not applicable  
**Product code** 2657-3550  
**Synonyms** Esteam Rust Remover, Esteam Rust Eraser

### Recommended use of the chemical and restrictions on use

**Recommended Use** Water based rust spot remover.  
**Uses advised against** Follow label instructions. Not recommended for any use except intended use.

### Supplier's details

#### **Supplier Address**

Esteam Cleaning Systems  
1-3680 Odyssey Drive  
Mississauga, ON L5M 0Y9  
Canada

#### **Manufacturer Address**

AramSCO Inc.  
4282 South 590 West  
Salt Lake City, UT 84123  
USA

### Emergency telephone number

**Company Phone Number** 1-800-767-6933  
**Company Emergency Phone Number** United States: 1-800-535-5053 (INFOTRAC – 24 hours, 7 days a week)  
International: 1-352-323-3500 (INFOTRAC – 24 hours, 7 days a week)  
**Emergency telephone** Poison Control 1-800-222-1222 (24 hour)

## 2. HAZARDS IDENTIFICATION

### Classification

#### **OSHA Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2

### GHS Label elements, including precautionary statements

#### **Emergency Overview**

##### **Warning**

##### **Hazard Statements**

Harmful if swallowed  
Harmful in contact with skin  
Causes skin irritation  
Causes serious eye irritation

**Appearance** water white**Physical state** liquid**Odor** acidic**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
 Do not eat, drink or smoke when using this product  
 Wear protective gloves/protective clothing/eye protection/face protection

**Precautionary Statements - Response**

Specific Treatment (See Section 4 on the SDS)  
 IF exposed or concerned: Get medical advice/attention.  
 IF ON SKIN: Wash with plenty of soap and water.  
 Call a POISON CENTER or doctor/physician if you feel unwell.  
 If skin irritation occurs: Get medical advice/attention.  
 Take off contaminated clothing and wash before reuse.  
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.  
 Rinse mouth.

**Precautionary Statements - Storage**

Keep out of reach of children

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)****Other information**

- May cause respiratory irritation
    - General Hazards
      - Keep out of reach of children
      - Please see Section 11. Toxicological Information for further information
- 0.78% of the mixture consists of ingredient(s) of unknown toxicity

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %	Trade Secret
Ammonium hydrogen fluoride	1341-49-7	1-5	*
Sulfamic acid	5329-14-6	1-5	*
2-(2-methoxypropoxy)propano	34590-94-8	1-5	*
Alcohol Ethoxylate	68439-46-3	1-5	*
Hydrogen fluoride ( <i>not intentionally added</i> )	7664-39-3	0.1-1	**

\*The exact percentage (concentration) of composition has been withheld as a trade secret

\*\*Not intentionally added. Contaminate byproduct from chemical process.

### 4. FIRST AID MEASURES

**First aid measures for different exposure routes****General advice**

Immediate medical attention is required. The effect of Hydrogen fluoride (HF), i.e. the onset of pain, particularly in dilute solutions, may not be felt for up to 24 hours. It is important that workers have immediate access to the antidote (calcium gluconate) both on and off the worksite in order to apply it as soon as possible.

**Eye contact**

Keep eye wide open while rinsing. Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Do not rub affected area. Rinse the eyes with a calcium gluconate 1% solution for 10 minutes. In the case of difficulty opening the lids,

administer an analgesic eyewash. Do not use oily drops, ointment, or HF skin burn treatments. Consult an ophthalmologist or eye specialist and physician immediately in all cases. Take to a hospital immediately.

**Skin contact**

Immediate medical attention is required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediately apply calcium gluconate gel 2.5 % and massage into the affected area using rubber gloves; continue to massage while repeatedly applying gel until 15 minutes after pain is relieved. Alternately, immerse the burned area in a solution of 0.2% iced aqueous Hyamine 1622 or 0.13% iced aqueous Zephiran Chloride. If finger/fingernails are touched, even if there is no pain, dip them in a bath of 5% calcium gluconate for 15 to 20 minutes. Consult a physician immediately in all cases of skin contact no matter how minor.

**Toxic - Inhalation**

Remove to fresh air. Call a physician or poison control center immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Remove the subject from the contaminated area as soon as possible. Transport subject lying down, with the head higher than the body, to a quiet, uncontaminated, and well-ventilated location. Administer oxygen (2.5% calcium gluconate if available, can be oxygen nebulized with trained personnel) or cardiopulmonary resuscitation if necessary and as soon as possible. If patient is unconscious, give artificial respiration. Note: Mouth to mouth resuscitation is not recommended. Keep warm (blanket). Consult physician in all cases. Take to a hospital.

**Ingestion**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Drink plenty of water. Immediate medical attention is required. Remove from exposure, lie down. Clean mouth with water and drink afterwards plenty of water. Call a physician or poison control center immediately. When directed by physician, give orally either 1% aqueous calcium gluconate solution, milk or calcium/magnesium containing anti-acid. Such solutions can be beneficial but also may be problematic if they induce vomiting.

**Protection of First-aiders**

Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. **Mouth to mouth resuscitation is not recommended.**

**Most important symptoms/effects, acute and delayed****Main Symptoms**

Any additional important symptoms and effects are described in Section 11: Toxicology Information.

**Indication of immediate medical attention and special treatment needed, if necessary****Notes to physician**

Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. Treat symptomatically.

**5. FIRE-FIGHTING MEASURES****Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media** CAUTION: Use of water spray when fighting fire may be inefficient.

**Specific hazards arising from the chemical**

No information available.

**Hazardous Combustion Products**

No information available.

**Explosion Data**

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

- Personal precautions** Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid contact with skin, eyes, or clothing. Keep people away from and upwind of spill/leak.
- Advice for emergency responders** For first aid see section 4. For personal protection see section 8.

### Environmental precautions

- Environmental precautions** Do not allow into any sewer, on the ground or into any body of water. Should not be released into the environment. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

### Methods and materials for containment and cleaning up

- Methods for Containment** Prevent further leakage or spillage if safe to do so. Cover powder spill with plastic sheet or tarp to minimize spreading. Dike far ahead of liquid spill for later disposal.
- Methods for cleaning up** Dike far ahead of liquid spill for later disposal. Soak up with inert absorbent material. Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly. Prevent product from entering drains. Dam up. After cleaning, flush away traces with water.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

- Advice on safe handling** Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Ensure adequate ventilation, especially in confined areas. In case of insufficient ventilation, wear suitable respiratory equipment. Use only with adequate ventilation and in closed systems. Always add acid to water.

### Conditions for safe storage, including any incompatibilities

- Technical measures/Storage conditions** Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep containers tightly closed in a dry, cool, and well-ventilated place. Keep in properly labeled containers. Keep/store only in original container. Do not reuse container.

- Packaging material** Keep product in packaging product is initially sold in.

- Incompatible products** Incompatible with strong acids and bases. Incompatible with oxidizing agents. Metals.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
2-(2-methoxypropoxy)propano 34590-94-8	STEL: 150 ppm TWA: 100 ppm S*	TWA: 100 ppm TWA: 600 mg/m <sup>3</sup> (vacated) TWA: 100 ppm (vacated) TWA: 600 mg/m <sup>3</sup> (vacated) STEL: 150 ppm (vacated) STEL: 900 mg/m <sup>3</sup> (vacated) S* S*	IDLH: 600 ppm TWA: 100 ppm TWA: 600 mg/m <sup>3</sup> STEL: 150 ppm STEL: 900 mg/m <sup>3</sup>
Ammonium Hydrogen Fluoride 1341-49-7	TWA: 2.5 mg/m <sup>3</sup> F	TWA: 2.5 mg/m <sup>3</sup> F TWA: 2.5 mg/m <sup>3</sup> dust (vacated) TWA: 2.5 mg/m <sup>3</sup>	TWA: 2.5 mg/m <sup>3</sup> F

Hydrogen fluoride 7664-39-3	TWA: 0.5 ppm F TWA: 2.5 mg/m <sup>3</sup> F S* Ceiling: 2 ppm F	TWA: 3 ppm F TWA: 2.5 mg/m <sup>3</sup> F TWA: 2.5 mg/m <sup>3</sup> dust (vacated) TWA: 3 ppm F (vacated) TWA: 2.5 mg/m <sup>3</sup> (vacated) STEL: 6 ppm F	IDLH: 30 ppm Ceiling: 6 ppm 15 min Ceiling: 5 mg/m <sup>3</sup> 15 min TWA: 3 ppm TWA: 2.5 mg/m <sup>3</sup>
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NIOSH IDLH: Immediately Dangerous to Life or Health

### Appropriate engineering controls

#### Engineering Measures

Showers  
Eyewash stations  
Ventilation systems.

### Individual protection measures, such as personal protective equipment

#### Eye/Face Protection

Tightly fitting safety goggles. Face shield.

#### Skin and body protection

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. Wear protective gloves and protective clothing.

#### Respiratory protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

#### Hygiene measures

When using do not eat, drink or smoke. Wash contaminated clothing before reuse. Keep away from food, drink and animal feeding stuffs. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Take off all contaminated clothing and wash it before reuse. Wear suitable gloves and eye/face protection. Keep working clothes separately.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Physical and chemical properties

#### Physical state

liquid

#### Odor

acidic

#### Appearance

colorless

#### Odor threshold

No information available

#### Color

water white

#### Property

#### Values

#### Remarks • Method

pH

4.0 - 5.0

Melting point

No information available

Boiling point/boiling range

> 100 °C / > 212 °F

Flash Point

No information available

Evaporation rate

Same as water

Flammability (solid, gas)

No information available

Flammability Limits in Air

Upper Flammability Limit

No information available

Lower Flammability Limit

No information available

Vapor pressure

No information available

Vapor density

No information available

Specific Gravity

1.012

Water solubility

Soluble in water

Solubility in other solvents

No information available

Partition coefficient: n-octanol/water

No information available

Autoignition temperature

No information available

Decomposition temperature

No information available

Viscosity, kinematic

Water thin

Viscosity, dynamic

No information available

Explosive properties

No information available

Oxidizing Properties

No information available

#### Other information

Softening point

No information available

Molecular weight	No information available
VOC Content (%)	3.0%
Density VALUE	8.42
Bulk Density VALUE	No information available

## 10. STABILITY AND REACTIVITY

### Reactivity

#### Chemical stability

Stable under recommended storage conditions

#### Possibility of hazardous reactions

None under normal processing

**Hazardous Polymerization**      None under normal processing.

#### Conditions to Avoid

Exposure to air or moisture over prolonged periods. Extremes of temperature and direct sunlight.

#### Incompatible Materials

Incompatible with strong acids and bases. Incompatible with oxidizing agents. Metals

#### Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating and toxic gases and vapors. Hydrogen fluoride

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Product Information

<b>Toxic - Inhalation</b>	Causes burns.
<b>Eye contact</b>	Avoid contact with eyes. Severely irritating to eyes.
<b>Skin contact</b>	Avoid contact with skin. Harmful in contact with skin.
<b>Ingestion</b>	Causes burns. Harmful if swallowed

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfamic acid 5329-14-6	= 1450 mg/kg (rat)	-	-
2-(2-methoxypropoxy)propano 34590-94-8	= 5230 mg/kg (rat)	= 9500 mg/kg (rabbit)	-
Ammonium Hydrogen Fluoride 1341-49-7	= 130 mg/kg (rat)	-	-
Hydrogen fluoride 7664-39-3	-	-	= 0.79 mg/l (rat) 1 h

### Information on toxicological effects

**Symptoms**      No information available.

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

<b>Skin corrosion/irritation</b>	Causes burns. Extremely corrosive and destructive to tissue.
<b>Eye damage/irritation</b>	Causes burns. Extremely corrosive and destructive to tissue. Risk of serious damage to eyes.
<b>Sensitization</b>	No information available.
<b>Germ cell mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP
Ammonium Hydrogen Fluoride 1341-49-7	-	Group 3	-

**OSHA (Occupational Safety and Health Administration of the US Department of Labor)**

X - Present

**IARC: (International Agency for Research on Cancer)**

Group 3 - Not Classifiable as to Carcinogenicity in Humans

<b>Reproductive toxicity</b>	No information available.
<b>Developmental Toxicity</b>	No information available.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.
<b>Chronic toxicity</b>	Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. Avoid repeated exposure. Possible risk of irreversible effects.
<b>Target Organ Effects</b>	Central nervous system, EYES, Respiratory system, Skin.
<b>Aspiration hazard</b>	No information available.

### Numerical measures of toxicity - Product Information

**Unknown acute toxicity** 0.78% of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document

<b>ATEmix (oral)</b>	995 mg/kg
<b>ATEmix (dermal)</b>	1113 mg/kg
<b>ATEmix (Inhalation-dust/mist)</b>	11.2458 mg/L

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
2-(2-methoxypropoxy)propano 34590-94-8	-	10000: 96 h Pimephales promelas mg/L LC50 static	1919: 48 h Daphnia magna mg/L LC50
Sulfamic acid 5329-14-6	-	14.2: 96 h Pimephales promelas mg/L LC50 static	-
Hydrogen fluoride 7664-39-3	-	660: 48 h Leuciscus idus mg/L LC50	270: 48 h Daphnia species mg/L EC50
EDTA-Acid 60-00-4	1.01: 72 h Desmodesmus subspicatus mg/L EC50	34 - 62: 96 h Lepomis macrochirus mg/L LC50 static 44.2 - 76.5: 96 h Pimephales promelas mg/L LC50 static	113: 48 h Daphnia magna mg/L EC50 Static

### Persistence and degradability

No information available.

### Bioaccumulation

No information available.

Chemical Name	Partition coefficient
Hydrogen fluoride 7664-39-3	-1.4
2-(2-methoxypropoxy)propano 34590-94-8	-0.064

### Other adverse effects

No information available

## 13. DISPOSAL CONSIDERATIONS

### Waste treatment

#### **Waste Disposal Methods**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated packaging** Do not re-use empty containers.

**US EPA Waste Number** U134

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Hydrogen fluoride 7664-39-3	U134	Yes	Yes	U134

This product contains one or more substances that are listed with the State of California as a hazardous waste.

**14. TRANSPORT INFORMATION**

**DOT**

**UN/ID No** UN3264  
**Proper shipping name** Corrosive liquid, acidic, inorganic, n.o.s. (Contains: Ammonium Hydrogen Fluoride)  
**Hazard class** 8  
**Packing Group** III  
**Reportable Quantity (RQ)** Ammonium Hydrogen Fluoride: RQ lb.= 100  
**Special Provisions** IB3, T7, TP1, TP28  
**Emergency Response Guide Number** 154  
**Quantity Limits** Inner packaging not over 5.0 L (1.3 gallons) net capacity each for liquids

**IMDG**

**UN/ID No** UN3264  
**Proper shipping name** Corrosive liquid, acidic, inorganic, n.o.s. (Contains: Ammonium Hydrogen Fluoride)  
**Hazard class** 8  
**Packing Group** III  
**EmS No.** F-A, S-B  
**Special Provisions** IBC03, T7, TP1, TP28

**IATA**

Do not ship by air unless within allowed limits  
**UN/ID No**  
**Proper shipping name**  
**Hazard class**  
**Packing Group**  
**Special Provisions**

**15. REGULATORY INFORMATION**

**International Inventories**

**TSCA** Complies  
**DSL/NDSL** Complies

**Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**US Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

**Acute Health Hazard** Yes  
**Chronic Health Hazard** Yes  
**Fire Hazard** No  
**Sudden Release of Pressure Hazard** No  
**Reactive Hazard** No

**Clean Water Act**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Ammonium Hydrogen Fluoride 1341-49-7	100 lb	-	-	X
Hydrogen fluoride 7664-39-3	100 lb	-	-	X
EDTA-Acid 60-00-4	5000 lb	-	-	X

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Ammonium Hydrogen Fluoride 1341-49-7	100 lb	-	RQ 100 lb final RQ RQ 45.4 kg final RQ
Hydrogen fluoride 7664-39-3	100 lb	100 lb	RQ 100 lb final RQ RQ 45.4 kg final RQ
EDTA-Acid 60-00-4	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ

**US State Regulations****California Proposition 65**

This product can expose you to chemicals including Acetaldehyde, which is known to the State of California to cause cancer, and Ethylene Glycol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**U.S. State Right-to-Know Regulations**

This product does not contain any substances regulated by state right-to-know regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Sulfamic Acid 5329-14-6	X	-	-
2-(2-methoxypropoxy)propano 34590-94-8	X	X	X
Ammonium Hydrogen Fluoride 1341-49-7	X	X	X
Hydrogen fluoride 7664-39-3	X	X	X
EDTA-Acid 60-00-4	X	X	X

**U.S. EPA Label information**

**EPA Pesticide Registration Number** Not applicable

**16. OTHER INFORMATION**

**NFPA** Health hazard 3 Flammability 1 Instability 0 Physical and chemical hazards B

**HMIS** Health hazard 3 Flammability 1 Physical Hazard 0 Personal protection B

**Prepared By** Aramsco  
Environmental Health & Safety

**Revision Date** 13 Feb 2023

**Revision Note**  
13 Feb 2023 No information available

**References** Raw ingredient SDSs

**Disclaimer**

The (M)SDS is intended to provide a brief summary of our knowledge and guidance regarding the use of this material. The information contained here has been compiled from sources considered by Bridgewater LLC to be dependable and is accurate to the best of the Company's knowledge. It is not meant to be an all-inclusive document on worldwide hazard communication regulations.

This information is offered in good faith. Each user of this material needs to evaluate the conditions of use and design the appropriate protective mechanisms to prevent employee exposures, property damage or release to the environment. Bridgewater LLC assumes no responsibility for injury to the recipient of third persons, or for any damage to any property resulting from misuse of the product.

**End of Material Safety Data Sheet**