SAFETY DATA SHEET

Replacement Date 14 Jan 2020 **Revision Date** 14 Feb 2022 **Version** 2.0

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

Product identifier

Product Label Name	T-RUST
Other means of identification	
UPC Code(s)	Not applicable
Product code	CS12
UN/ID No	UN3264
Synonyms	None

Recommended use of the chemical and restrictions on use

Recommended Use	Specialty spot remover. Rust remover and other mineral based soils such as metal stains, water stains and rings.
Uses advised against	Follow label instructions. Not recommended for any use except intended use.

Supplier's details

Supplier Address	**Manufacturer Address**
Bridgepoint Systems	Aramsco
4282 South 590 West	4282 South 590 West
Salt Lake City, UT 84123	Salt Lake City, UT 84123
USA	USA

Emergency telephone number

Company Phone Number	1-800-658-5314
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 (*not intentionally added*)	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
The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating and toxic gases and vapors. In the event of fire and/or explosion do not breathe fumes.

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^3 (vacated) TWA: 100 ppm (vacated) TWA: 600 mg/m^3 (vacated) STEL: 150 ppm (vacated) STEL: 900 mg/m^3 (vacated) S* S*	IDLH: 600 ppm TWA: 100 ppm TWA: 600 mg/m^3 STEL: 150 ppm STEL: 900 mg/m^3
Ammonium Hydrogen Fluoride 1341-49-7	TWA: 2.5 mg/m^3 F	TWA: 2.5 mg/m^3 F TWA: 2.5 mg/m^3 dust (vacated) TWA: 2.5 mg/m^3	TWA: 2.5 mg/m^3 F
Hydrogen fluoride 7664-39-3	TWA: 0.5 ppm F TWA: 2.5 mg/m^3 F S* Ceiling: 2 ppm F	TWA: 3 ppm F TWA: 2.5 mg/m^3 F TWA: 2.5 mg/m^3 dust (vacated) TWA: 3 ppm F (vacated) TWA: 2.5 mg/m^3 (vacated) STEL: 6 ppm F	IDLH: 30 ppm Ceiling: 6 ppm 15 min Ceiling: 5 mg/m^3 15 min TWA: 3 ppm TWA: 2.5 mg/m^3

NIOSH IDLH: Immediately Dangerous to Life or Health

Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Tight sealing safety goggles. Face protection 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		
Appearance	Colorless	**Odor**	Acidic
Color	Water White	**Odor threshold**	No information available

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

Toxic - Inhalation Causes burns.

Eye contact Severely irritating to eyes.

Skin contact Harmful in contact with skin.

Ingestion 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

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

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

IARC (International Agency for Research on Cancer)
Group3 - Not classifiable as a human carcinogen

Reproductive toxicity No information available.
Developmental Toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Chronic toxicity 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.
Target organ effects Central nervous system, EYES, Respiratory system, Skin.
Aspiration hazard 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 .
ATEmix (oral) 995 mg/kg
ATEmix (dermal) 1113 mg/kg
ATEmix (Inhalation-dust/mist) 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 – Maritime Transportation

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 – Air Transportation 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 contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	SARA 313 - Threshold Values %
2-(2-methoxypropoxy)propano - 34590-94-8	1.0

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 contains the following substances which are regulated 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 does not contain any Proposition 65 chemicals.

U.S. 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 and Safety
Revision Date 14 Feb 2022
Revision Note
14 Feb 2022 – Review, no changes made
14 Jan 2020 – No information available

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 Aramsco Inc. 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. Aramsco Inc. 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