SAFETY DATA SHEET

Issue Date 01-Apr-2015 **Revision Date** 23-Jan-2017 **Version** 6

1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Product Name **DR S.T.S. (SAF-T-STEP) FLOOR CLEANER AND SAFETY TREATMENT**
Product Code **DLOSTSXXDR-STS**
Customer Code **STS-128 (4x1 Gallon), STS-5 (5 Pail), STS-55 (55 Drum), SKU 023609019129**

Other means of identification

Recommended use of the chemical and restrictions on use

Recommended Use SLIP RESISTANT FLOOR CLANER & SAFETY TREATMENT FOR POROUS SURFACES
Uses advised against Use only as stated on label.

Details of the supplier of the safety data sheet

Manufactured For / Distributed By
Dynamic Research Brand a Formula Corp Brand
4432 C ST NE
Auburn, WA 98002
Phone (800) 772-7005
E-Mail sales@saf-t-step.com

Emergency telephone number

24 Hour Emergency Phone Number (800) 228-5635 X059

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This product has been classified in accordance with the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 5
Acute toxicity - Dermal	Category 5
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Acute aquatic toxicity	Category 3

Label elements

Emergency Overview

Warning

Hazard statements
May be harmful if swallowed
May be harmful in contact with skin
Causes skin irritation
Causes serious eye irritation

Harmful to aquatic life

Precautionary Statements - Prevention
- Wash face, hands and any exposed skin thoroughly after handling
- Wear protective gloves/protective clothing/eye protection/face protection
- Avoid release to the environment

Precautionary Statements - Response
- Specific Treatment (See Section 4 on the SDS)

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of soap and water. 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: Rinse mouth. DO NOT induce vomiting. Drink plenty of water.

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

Unknown Acute Toxicity 0% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%	Trade Secret
Water	7732-18-5	60-100	*
Sulfamic Acid	5329-14-6	1-5	*
Alcohols, C10-16, ethoxylated	68551-12-2	1-5	*
1-Butoxy-2-Propanol	5131-66-8	1-5	*
Glycolic Acid	79-14-1	1-5	*
Ammonium Hydrogen Fluoride	1341-49-7	.1-1	*
Hydrofluoric Acid	7664-39-3	.1-1	*
Citric Acid	77-92-9	.1-1	*
Xanthan Gum	11138-66-2	<0.1	*

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

4. FIRST AID MEASURES

First aid measures

General advice If symptoms persist, call a physician. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Immediate medical attention is required. : The effect

of Hydrofluoric Acid (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.

Skin Contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Consult a physician if necessary. 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.

Eye contact Keep eye wide open while rinsing Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes If symptoms persist, call a physician Immediate medical attention is required Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes 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.

Inhalation Remove to fresh air. Call a physician. If breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician or poison control center immediately. 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. Drink plenty of water. Rinse mouth. If symptoms persist, call a physician. Immediate medical attention is required. Remove from exposure, lie down. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. 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.

Self-protection of the first aider Use personal protective equipment as required. **: Mouth to mouth resuscitation is not recommended.**

Most important symptoms and effects, both acute and delayed

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

Indication of any immediate medical attention and special treatment needed

Note to physicians 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.

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.

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 Evacuate personnel to safe areas. Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Keep people away from and upwind of spill/leak.

Environmental precautions

Environmental precautions Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Cover liquid spill with sand, earth or other non-combustible absorbent material. Cover powder spill with plastic sheet or tarp to minimize spreading. Pick up and transfer to properly labeled containers. Dam up. Take up mechanically, placing in appropriate containers for disposal. After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. 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

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.

Incompatible materials Incompatible with strong acids and bases. Incompatible with oxidizing agents. Metals. Strong acids. Aluminum.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ammonium Hydrogen Fluoride 1341-49-7	TWA: 2.5 mg/m³ F	TWA: 2.5 mg/m³ F (vacated) TWA: 2.5 mg/m³	TWA: 2.5 mg/m³ F
Hydrofluoric Acid 7664-39-3	TWA: 0.5 ppm F TWA: 2.5 mg/m³ F S* Ceiling: 2 ppm F	TWA: 3 ppm F TWA: 2.5 mg/m³ F (vacated) TWA: 3 ppm F (vacated) TWA: 2.5 mg/m³ (vacated) STEL: 6 ppm F	IDLH: 30 ppm Ceiling: 6 ppm 15 min Ceiling: 5 mg/m³ 15 min TWA: 3 ppm TWA: 2.5 mg/m³

NIOSH IDLH Immediately Dangerous to Life or Health

Other Information 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 Controls	Showers, Eyewash stations & Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles). Wear a face shield if splashing hazard exists.
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.
General Hygiene	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

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Clear
Color	Green
Odor	Sweet
Odor threshold	No Information available

Property	Values	Remarks • Method
pH	2.0 - 3.0	
Specific Gravity	1.03	
Viscosity	Water Thin	
Melting point/freezing point	No Information available	
Flash point	Above 200°F	
Boiling point / boiling range	No Information available	
Evaporation rate	Same as water	
Flammability (solid, gas)		
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	
Water solubility	Soluble in water	
Partition coefficient	No Information available	
Autoignition temperature	No Information available	
Decomposition temperature	No Information available	

Other Information

Density Lbs/Gal	8.6
VOC Content (%)	2.6% VOC CARB COMPLIANT for product category

10. STABILITY AND REACTIVITY

Reactivity

No data available

Stability Stable under recommended storage conditions.
Possibility of Hazardous Reactions 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. Strong acids. Aluminum.
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 The primary effects and toxicity of this material are due to it corrosive nature.
Inhalation Causes burns.
Eye contact Severely irritating to eyes.
Skin Contact May be harmful in contact with skin.
Ingestion Causes burns. May be harmful if swallowed.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfamic Acid 5329-14-6	= 1450 mg/kg (Rat)	-	-
Glycolic Acid 79-14-1	= 1950 mg/kg (Rat)	-	= 3.6 mg/L (Rat) 4 h
Ammonium Hydrogen Fluoride 1341-49-7	= 130 mg/kg (Rat)	-	-
Hydrofluoric Acid 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

Corrosivity 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)
Group 3 -Not classifiable as a human carcinogen

Reproductive 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 EYES, Respiratory system, Skin.
Aspiration hazard No Information available.

Numerical measures of toxicity - Product Information

Unknown Acute Toxicity 0% of the mixture consists of ingredient(s) of unknown toxicity

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

12. ECOLOGICAL INFORMATION

Ecotoxicity

3.59% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Sulfamic Acid 5329-14-6	-	14.2: 96 h Pimephales promelas mg/L LC50 static	-
Glycolic Acid 79-14-1	-	5000: 96 h Brachydanio rerio mg/L LC50 static	-
Hydrofluoric Acid 7664-39-3	-	660: 48 h Leuciscus idus mg/L LC50	270: 48 h Daphnia species mg/L EC50
Citric Acid 77-92-9	-	1516: 96 h Lepomis macrochirus mg/L LC50 static	120: 72 h Daphnia magna mg/L EC50

Persistence and degradability No Information available.

Bioaccumulation No Information available.

Chemical Name	Partition coefficient
Glycolic Acid 79-14-1	-1.11
Hydrofluoric Acid 7664-39-3	-1.4
Citric Acid 77-92-9	-1.72

Other adverse effects No Information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

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

Contaminated packaging Do not reuse container.

US EPA Waste Number D002 U134 U154

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Hydrofluoric Acid 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

Note: The basic description below is specific to the container size. This information is provided for at a glance DOT information. Please refer to the container and/or shipping papers for the appropriate shipping description before tendering this material for shipment. For additional information, please contact the distributor listed in section 1 of this SDS.

U.S. Department of Transportation (USDOT)

4x1 Gallon Case *Not regulated*

Pails & Drums (<119 Gallons) *Not regulated*

15. REGULATORY INFORMATION

International Inventories

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

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
Reactive Hazard	No
Sudden release of pressure hazard	No

CWA (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
Hydrofluoric Acid 7664-39-3	100 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
Hydrofluoric Acid 7664-39-3	100 lb	100 lb	RQ 100 lb final RQ RQ 45.4 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	-	-
Ammonium Hydrogen Fluoride 1341-49-7	X	X	X
Hydrofluoric Acid	X	X	X

7664-39-3			

U.S. EPA Label Information

EPA Pesticide Registration Number Not Applicable

Additional information No Information available.

16. OTHER INFORMATION

HMIS

Health hazards	Flammability	Physical hazards	Personal protection
3	1	0	B

Prepared By Regulatory Department
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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet