

a **Formula Corp** brand

Issue Date 01-Apr-2015

Revision Date 23-Jan-2017

Version 6

SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Product Name DR S.T.S. (SAF-T-STEP) FLOOR CLEANER AND SAFETY TREATMENT
Product Code DLOSTXXDR-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

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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

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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.

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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/m ³ F | TWA: 2.5 mg/m ³ F (vacated) TWA: 2.5 mg/m ³ | TWA: 2.5 mg/m ³ F |
| Hydrofluoric Acid 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 (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 Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962

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(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 |

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|-------------------------------|--------------------------|--------------------------------|
| 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**

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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 its 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

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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*

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| | | | |
|-----------|--|--|--|
| 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 3 | Flammability 1 | Physical hazards 0 | Personal protection B |
|-----------------------------------|---------------------------------|-------------------------------------|--|

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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