



SAFETY DATA SHEET

Revision Date 15-January-2016

Version 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name F-2303 Gel Flux/SS

UN/ID No UN3264
Product Code F-2303

Recommended Use of the Chemical and Restrictions on Use

Recommended Use Cleaning agent.

Details of the Supplier of the Safety Data Sheet

Supplier Address

Delta Foremost Chemical Corporation
3915 Air Park St.
Memphis, Tennessee 38118

Emergency Telephone Number

Company Phone Number (901) 363-4340
Emergency Telephone INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Classification

Skin Corrosion/Irritation	Category 1 Sub-category B
Serious Eye Damage/Eye Irritation	Category 2A
Acute toxicity - Oral	Category 3
Acute toxicity - Dermal	Category 2
Acute toxicity - Inhalation (Dusts/Mists)	Category 3
Corrosive to Metals	Category 1

Signal Word

DANGER

Hazard Statements

Toxic if swallowed
Fatal in contact with skin
Toxic if inhaled
Causes severe skin burns
Causes serious eye irritation
May be corrosive to metals



Appearance Clear Amber Liquid**Physical State** Liquid**Odor** Acidic**Precautionary Statements - Prevention**

Use only outdoors or in a well-ventilated area.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash face, hands and any exposed skin thoroughly after handling

Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

Immediately call a POISON CENTER or doctor/physician

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Immediately call a POISON CENTER or doctor/physician

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Immediately call a POISON CENTER or doctor/physician

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

Precautionary Statements - Storage

Store locked up. Store in a well-ventilated place. Keep container tightly closed.

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other Hazards

Harmful to aquatic life with long lasting effects

Harmful to aquatic life

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Nitric Acid	7697-37-2	Proprietary
Hydrogen fluoride	7664-39-3	Proprietary
Sulfuric Acid	7664-93-9	Proprietary

Product contains a proprietary mixture of ingredients.

4. FIRST AID MEASURES**First Aid Measures****General Advice**

Provide this SDS to medical personnel for treatment. Hydrofluoric (HF) acid burns require immediate and specialized first aid and medical treatment. Symptoms may be delayed up to 24 hours depending on the concentration of HF. After decontamination with water, further damage can occur due to penetration/absorption of the fluoride ion. Treatment should be directed toward binding the fluoride ion as well as the effects of exposure. Skin exposures can be treated with a 2.5% calcium gluconate gel repeated until burning ceases. More serious skin exposures may require subcutaneous calcium gluconate except for digital areas unless the physician is experienced in this technique, due to the potential for tissue injury from increased pressure. Absorption can readily occur through the subungual areas and should be considered when undergoing decontamination. Prevention of absorption of the fluoride ion in cases of ingestion can be obtained by giving milk, chewable calcium carbonate tablets or Milk of Magnesia to conscious victims. Conditions such as hypocalcemia, hypomagnesemia and cardiac arrhythmias should be monitored for, since they can occur after exposure. Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area. .

Eye Contact

Flush with plenty of water for at least 15 minutes. See physician immediately.

Skin Contact	Immediately flush with large amounts of water while removing contaminated clothing and shoes, paying particular attention to skin under nails. Follow by applying iced alcoholic or aqueous benzalkonium chloride solution. Get medical attention immediately.
Inhalation	Remove to fresh air. Seek immediate medical attention/advice.
Ingestion	Do NOT induce vomiting. Drink large quantities of water without delay. Drink milk or milk of magnesia. Get medical attention immediately.

Most Important Symptoms and Effects, both Acute and Delayed

Symptoms	EYES: Causes severe irritation and painful burning of the eyes and eyelids. If not quickly removed, may cause permanent visual impairment. INGESTION: It causes severe burns of the mucous membranes of the mouth, esophagus, and stomach. Causes intense thirst, nausea, and vomiting.
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Indication of any Immediate Medical Attention and Special Treatment Needed

Note to Physicians	Treat symptomatically.
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5. FIRE-FIGHTING MEASURES**Suitable Extinguishing Media**

Foam, carbon dioxide or dry chemical extinguisher, or water.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

Product is not flammable.

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	Wear protective clothing as described in Section 8 of this safety data sheet. Ventilate affected area.
Environmental Precautions	See Section 12 for additional ecological information.

Methods and Material for Containment and Cleaning Up

Methods for Containment	Prevent further leakage or spillage if safe to do so. Contain and absorb with suitable absorbent for disposal.
Methods for Cleaning Up	Soak up with inert absorbent material. Reclaim spilled material into approved container for proper disposal. Remaining material may be neutralized. For waste disposal, see section 13 of the SDS. Neutralize with a lime or soda ash and flush area with large amounts of water.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Advice on Safe Handling

Use personal protection recommended in Section 8. Wash face, hands, and any exposed skin thoroughly after handling. Do not breathe vapors or spray mist. Use only in well-ventilated areas. Do not eat, drink or smoke when using this product.

Conditions for Safe Storage, Including any Incompatibilities

Storage Conditions

Keep container tightly closed and store in a cool, dry and well-ventilated place. Store locked up.

Incompatible Materials

Bases, Strong oxidizing agents. Reacts with soft metals and forms hydrogen gas.

Packaging Materials

Do not use glass containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m ³	TWA: 1 mg/m ³	TWA: 1 mg/m ³
Nitric Acid 7697-37-2	STEL: 4 mg/m ³ TWA: 2 mg/m ³	TWA: 5 mg/m ³	TWA: 5 mg/m ³
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

Appropriate Engineering Controls

Engineering Controls

Ventilation must be adequate to maintain the ambient workplace atmosphere below the exposure limit(s) outlined in the SDS.

Individual Protection Measures, such as Personal Protective Equipment

Eye/Face Protection

Goggles or face shield.

Skin and Body Protection

Wear protective Neoprene™ gloves, Rubber gloves.

Respiratory Protection

Ensure adequate ventilation, especially in confined areas. Use solvent type mask if continued exposure.

General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State
Appearance
Color

Liquid
Viscous Liquid
Amber

Odor
Odor Threshold

Acidic
Not determined

Property

Values

Remarks • Method

pH

1.0 – 2.0

Melting Point/Freezing Point

Not available

Boiling Point/Boiling Range	100 °C / 212 °F
Flash Point	Not available
Evaporation Rate	Not available
Flammability (Solid, Gas)	Not determined
Upper Flammability Limits	Not available
Lower Flammability Limit	Not available
Vapor Pressure	Same as water
Vapor Density	Same as water
Specific Gravity	1.050 (1=Water)
Water Solubility	Soluble in water
Solubility in Other Solvents	Not determined
Partition Coefficient	Not determined
Autoignition Temperature	Not determined
Decomposition Temperature	Not determined
Kinematic Viscosity	Not determined
Dynamic Viscosity	Not determined
Explosive Properties	Not determined
Oxidizing Properties	Not determined

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions. Will react with incompatible materials.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization

Hazardous polymerization does not occur.

Conditions to Avoid

Keep out of reach of children.

Incompatible Materials

Bases, Strong oxidizing agents. Reacts with soft metals and forms hydrogen gas.

Hazardous Decomposition Products

None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Product Information

Eye Contact

Causes serious eye irritation.

Skin Contact

Causes severe skin burns. Fatal in contact with skin.

Inhalation

Toxic if inhaled.

Ingestion

Toxic if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 510 mg/kg (Rat) 2 h
Hydrogen fluoride 7664-39-3	-	-	= 850 mg/m ³ (Rat) 1 h = 1276 ppm (Rat) 1 h

Information on Physical, Chemical and Toxicological Effects**Symptoms**

Please see section 4 of this SDS for symptoms.

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-term Exposure**Carcinogenicity**

This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Numerical Measures of Toxicity

Not determined

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Sulfuric acid 7664-93-9		42: 96 h Gambusia affinis mg/L L50		29: 24 h Daphnia magna mg/L EC50
Hydrogen fluoride 7664-39-3		660: 48 h Leuciscus idus mg/L LC50		270: 48 h Daphnia species mg/L EC50

Persistence and Degradability

Not determined

Bioaccumulation

Not determined

Mobility

Chemical Name	Partition Coefficient
Hydrogen fluoride 7664-39-3	-1.4

Other Adverse Effects

Not determined

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

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

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

14. TRANSPORT INFORMATION

Note

Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT

UN/ID No UN3264
 Proper Shipping Name Corrosive, Liquid, Acidic, Inorganic, N.O.S.
 Hazard Class 8
 Packing Group II

IATA

UN/ID No UN3264
 Proper Shipping Name Corrosive, Liquid, Acidic, Inorganic, N.O.S.
 Hazard Class 8
 Packing Group II

IMDG

UN/ID No UN3264
 Proper Shipping Name Corrosive, Liquid, Acidic, Inorganic, N.O.S.
 Hazard Class 8
 Packing Group II

15. REGULATORY INFORMATION

International Inventories

Not Determined

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

US Federal Regulations**CERCLA**

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Hydrogen fluoride 7664-39-3	100 lb	100 lb	RQ 100 lb final RQ RQ 45.4 kg final RQ

SARA 302

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Sulfuric acid	7664-93-9	Proprietary	1.0
Nitric acid	7697-37-2	Proprietary	1.0

SARA 313

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Sulfuric acid	7664-93-9	Proprietary	1.0
Nitric acid	7697-37-2	Proprietary	1.0
Hydrofluoric acid	7664-39-3	Proprietary	1.0

CWA (Clean Water Act)

Component	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Hydrogen fluoride 7664-39-3	100 lb			X

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

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Sulfuric acid 7664-93-9	X	X	X
Nitric Acid 7697-37-2	X	X	X
Hydrogen fluoride 7664-39-3	X	X	X

16. OTHER INFORMATION**NFPA****Health Hazards**

3

Flammability

0

Instability

1

Special Hazards

Not determined

HMIS**Health Hazards**

3

Flammability

0

Physical Hazards

1

Personal Protection

Not determined

Revision Date

15-January-2016

Revision Note

New format

Disclaimer

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