

1. Product and Company Identification

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Product Name Hydrofluorosilicic acid

Part Number RXSOL-60-6610-025

Company Details:

RX MARINE INTERNATIONAL
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2. Composition / Information on ingredients

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Chemical Name	Cas No	EC No	Weight	Formula
Hydrofluorosilicic acid	16961-83-4	-	25%	H ₂ SiF ₆

3. Hazards Identification

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Signal Word

Danger

Hazard Statements

May be corrosive to metals. Causes severe skin burns and eye damage. Harmful if swallowed. Toxic if inhaled.

Precautionary statements

Keep only in original packaging. Do not breathe mist or vapour. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Absorb spillage to prevent material-damage. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. IF INHALED: remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Specific treatment (see information on this label). Store in a corrosion resistant container with a resistant inner liner. Store locked up. Store in a well-ventilated place. Keep container tightly closed. Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification of the substance or mixture

No data available

Supplemental Hazard Statements

No data available

Other hazards

For the disposal see section: 2

4. First Aid Measures

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General advice

If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the

	doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children. .
If inhaled	IF INHALED remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor
Eye Contact	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/doctor.
Swallowed	No data available
Skin Contact	a. Immediately remove contaminated clothing and continually flush exposed areas of skin with large volumes of water. Rinsing may be limited to 5 minutes if 0.13% benzalkonium chloride solution or 2.5% calcium gluconate gel is available, with the soaks or gel applied as soon as the rinsing is stopped. If not available, rinsing must continue until medical treatment is rendered. Skin contact b. Immediately after thorough washing, use one of the measures below: 1. Begin soaking the affected areas in iced 0.13% benzalkonium chloride solution. Use ice cubes, not shaved ice, in order to prevent frostbite. If immersion is not practical, towels should be soaked with iced 0.13% benzalkonium chloride solution and used as compresses for the burned area. Compresses should be changed every 2 to 3 minutes. Soaks or compresses should be continued until pain is relieved or until more definitive medical treatment is provided. Relief of the pain is an indication of the success of treatment; therefore, local anesthetics should be avoided. It is recommended the applier wear chemical protective gloves (e.g. butyl rubber gloves). 2. Gently massage a liberal quantity of calcium gluconate 2.5% gel - commercial preparation, 'HF Antidote Gel' if available or prepare at site by adding 10 mL of 10% calcium gluconate injectable solution to 30 mL of KY jelly or Muko other water soluble gels also suitable. (Note: Taro Gel is physically incompatible with calcium gluconate and must not be used. Do not use calcium chloride as it causes skin necrosis). Apply gel every 15 minutes and massage continuously until pain subsides and/or redness disappears or until medical attention becomes available. It is recommended the applier wear chemical protective gloves, (e.g. butyl rubber gloves).
Inhalation	No data available
Ingestion	IF SWALLOWED Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor
Most important symptoms and effects, both acute and delaye	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
Indication of any immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically

5. Fire-fighting Measures

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Flammability	No data available
Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Special hazards arising from the substance or mixture	During fire, gases hazardous to health may be formed.
Further information	No data available
Hazardous combustion products	May include and are not limited to: Fluoride gases. Hydrogen fluoride
Advice for firefighters	Move containers from fire area if you can do so without risk.
Protective Equipment	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Specific Method	Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental Release Measures

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Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapour. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8.
Spillage	No data available
Personal Protection	No data available
Environmental Precaution	Avoid discharge into drains, water courses or onto the ground. Do not discharge into lakes, streams, ponds or public waters.
Methods and materials for containment and cleaning	Prevent entry into waterways, sewer, basements or confined areas. containment and cleaning up Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb spillage to prevent material damage. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination
Reference to other sections	No data available

7. Handling and Storage

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Hygiene measures	Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. When using do not eat or drink
Advice on safe handling	Do not breathe mist or vapour. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. When using, do not eat, drink or smoke. Use only outdoors or in a well-ventilated area. Avoid prolonged exposure. Wear appropriate personal protective equipment. Wash thoroughly after handling. Use good industrial hygiene practices in handling this material.
Conditions for safe storage, including any incompatibilities	Store locked up. Store in a cool, dry place out of direct sunlight. Store in corrosive resistant container with a resistant inner liner. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Keep out of reach of children.
Specific end use(s)	Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. Exposure controls and personal protection

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Exposure controls	Personal protective equipment
Engineering Control	Ensure adequate ventilation, especially in confined areas. Avoid generating mists. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station
Eye/face protection	Wear safety glasses with side shields (or goggles) and a face shield
Body Protection	Protective clothing
Skin protection	Wear appropriate chemical resistant gloves. Impervious gloves. Confirm with reputable supplier first. As required by employer code. Use of an impervious apron is recommended. Wear appropriate chemical resistant

Respiratory protection

clothing. Where contact is likely, wear chemical-resistant gloves, a chemical suit, rubber boots, and chemical safety goggles plus a face shield. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Other Respiratory protection Where exposure guideline levels may be exceeded, use an approved NIOSH respirator. Respirator should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134), CAN/CSA-Z94.4 and ANSI's standard for respiratory protection (Z88.2). Emergency responders should wear self-contained breathing apparatus (SCBA) to avoid inhalation of vapours generated by this product during a spill or other clean-up operations.

Other Protection Measure

No data available

9. Physical and chemical properties

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Physical state	Liquid Clear
Colour	Light yellow
Odour	Pungent
Odor Threshold	Not Applicable
pH	1.2 (1% solution)
Melting Point	-15.56 °C (4 °F)
Boiling Point	105.56 °C (222 °F)
Flash Point	No data available
Evaporation Rate	Not data available
Flammability (solid, gas)	No data available
Explosive limits	No data available
Upper/lower flammability or explosive limits	No data available
Autoignition temperature	No data available
Decomposition temperature	No data available
Vapour pressure	24 @ 77°F
Viscosity	No data available
Density	No data available
Relative Density	No data available
Specific Gravity	1.234 @ 25%
Partition coefficient	No data available
Explosive properties	No data available
Solubility	No data available
Ignition temperature	No data available.
Particle characteristics	No data available

10. Stability and reactivity

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Reactivity	May be corrosive to metals. Caustics. This product may react with strong oxidizing agents
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No data available
Conditions to avoid	Do not mix with other chemicals.
Incompatible materials	Strong oxidizing agents. Metals.
Hazardous decomposition products	May include and are not limited to: Fluoride gases. Hydrogen fluoride.

11. Toxicological information

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Acute toxicity	Inhalation LC50 Oral LD50 Rat 1.1 mg/L, 1 hr, ACROS ORGANICS Guinea pig Rat 200 mg/kg, HSDB 430 mg/kg, HSDB 125 mg/kg, LOLIToxic if inhaled. Harmful if swallowed.
Skin corrosion/irritation	Causes severe skin burns and eye damage
Serious eye damage/irritation	Causes serious eye damage.
Respiratory or skin sensitization	No data available
Carcinogenicity	No data available
Germ cell mutagenicity	No data available
Reproductive toxicity	No data available
Chronic effect	Prolonged inhalation may be harmful. Exposure to fluorides over the years may produce an embrittlement and densification of bones, and an increased calcification of ligaments and vertebrae resulting in spinal stiffness.
Specific target organ toxicity - single exposure	No data available
Additional Information	No data available

12. Ecological information

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Persistence and degradability	No data available
Toxicity to fish	No data available
Toxicity to daphnia and other aquatic invertebrates	No data available
Toxicity	No data available
Toxicity to bacteria	No data available
Toxicity to algae	No data available
Products Biodegradation	No data available
Mobility in soil	No data available
Results of PBT and vPvB assessment	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Endocrine disrupting properties	Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
Other adverse effects	No data available .

13. Disposal considerations

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Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste residues product	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

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UN number	ADR/RID:1778	IMDG:1778	IATA:1778
UN proper shipping name	ADR/RID:FLUROSILICIC ACID	IMDG:FLUROSILICIC ACID	IATA:FLUROSILICIC ACID

Transport hazard class(es)	ADR/RID:8	IMDG:8	IATA:8
Packaging group	ADR/RID:II	IMDG:II	IATA:II
Environmental hazards	ADR/RID:No	IMDG:No	IATA:No
Special precautions for user	No data available		
Further information	No data available		

15. Regulatory information

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Safety, health and environmental regulations/legislation specific for the substance or mixture	This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006
Other regulations	No data available
Chemical Safety Assessment	For this product a chemical safety assessment was not carried out

16. Other information

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Other Information

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