

SAFETY DATA SHEET – Original Formula Novel™ Laundry Rust Remover

1. Identification

1.1 Product Identifier: Original Formula Novel Laundry Rust Remover

1.2 Recommended Use of the Chemical and Restrictions on Use: Removes rust stains from textiles. For industrial/institutional use only. Do not use at home. Keep out of reach of children.

1.3 Details of the Supplier of the Safety Data Sheet:

Novel Technology Labs, PO Box 207, Kearny, NJ 07032, USA

Telephone: 201-997-3300

E-mail: NovelSDS@ALWilson.com

1.4 Emergency Telephone Number:

Chemtrec: 800-424-9300 or 703-527-3887

2. Hazards Identification

2.1 Classification of the Substance or Mixture:

Ingestion – Acute Toxicity – Category 2

Inhalation – Acute Toxicity – Category 2

Skin and Eye Corrosion/Irritation – Category 1 (Skin Corrosion 1A)

Skin Toxicity – Acute Toxicity – Category 1

2.2 Label Elements:

Contains: 5-12% Hydrofluoric Acid [7664-39-3], 8-16% Ammonium Bifluoride [1341-49-7], Water [7732-18-5].

Hazard Pictograms:



Signal Word: Danger

Hazard Statements:

H300+H330+H310: Fatal if swallowed, inhaled, or in contact with skin.

H314: Causes severe skin burns and eye damage.

H290: May be corrosive to metals.

Precautionary Statements:

Prevention:

P102: Keep out of reach of children.

P260: Do not breathe vapors.

P264: Wash hands thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P310: Immediately call a POISON CENTER or doctor/physician.

P301+P330+P331+P321: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Drink large quantities of water first, then milk or Milk of Magnesia. Never give anything by mouth to an unconscious person.

P303+P361+P353+P363: IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.

P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage:

P234: Keep only in original container.

P405: Store locked up.

Disposal Considerations:

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P501: Dispose of contents/container to hazardous or special waste collection point and in accordance to applicable regulations.

2.3 Other Hazards:

Causes severe burns which may not be immediately painful or visible.

Specialized medical treatment required for all exposures.

Ensure all equipment (including Personal Protective Equipment) is compatible with all product components.

See section 8 for exposure limits.

3. Composition/Information on Ingredients

Name	CAS No.	Concentration
Hydrofluoric Acid	7664-39-3	5% ≤ C ≤ 12%
Ammonium Bifluoride	1341-49-7	8% ≤ C ≤ 16%
Water	7732-18-5	75% ≤ C ≤ 85%

4. First Aid Measures

4.1 Description of Necessary First Aid Measures:

SPECIALIZED MEDICAL TREATMENT REQUIRED FOR ALL EXPOSURES. SEEK IMMEDIATE MEDICAL ATTENTION AND COMMUNICATE CLEARLY TO THE COMPETENT DOCTOR OR AUTHORITY THE TYPE AND LEVEL OF HYDROFLUORIC ACID EXPOSURE.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get immediate medical attention.

Skin Contact: Remove immediately all contaminated clothing. Rinse skin with water/shower for at least 15 minutes. Get immediate medical attention. Wash contaminated clothing before reuse.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes. Get immediate medical attention.

Ingestion: Rinse mouth. Do NOT induce vomiting. Drink large quantities of water first, then Milk or Milk of Magnesia. Never give anything by mouth to an unconscious person. Get immediate medical attention.

4.2 Most Important Symptoms/Effects, both Acute and Delayed:

Eye Contact: Liquid causes severe permanent eye damage.

Skin Contact: Liquid may cause severe skin burns which may not be immediately painful or visible, and may penetrate skin and damage underlying tissue.

4.3 Indication of Immediate Medical Attention and Special Treatment Needed: Specialized medical treatment required for all exposures. Seek immediate medical attention and communicate clearly to the competent doctor or authority the type and level of Hydrofluoric Acid exposure. See First Aid Reference in Section 16.

5. Fire-fighting Measures

5.1 Suitable Extinguishing Media:

Suitable Extinguishing Media: Use water or Carbon Dioxide “CO₂” for fires in area.

Unsuitable Extinguishing Media: Do not use high pressure water jet or water stream.

5.2 Specific Hazards Arising from the Substance or Mixture: Hydrogen gas may be generated when acid comes in contact with metal. At decomposition, emits highly corrosive fluoride fumes.

5.3 Special Protective Action for Fire-fighters: Use appropriate Personal Protective Equipment when fighting chemical fires. Ensure all equipment (including Personal Protective Equipment) is compatible with all product components.

Additional Information: Use water spray to cool nearby containers exposed to fire.

6. Accidental Release Measures

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6.1 Personal Precautions, Protective Equipment and Emergency Procedures: Cordon off spill area. Wear protective clothing, gloves, apron, boots, hat, and closed safety glasses or chemical splash goggles. Ensure all equipment (including Personal Protective Equipment) is compatible with all product components. Remove immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.

6.2 Environmental Precautions: Avoid release to the environment. Dispose of contents/container to hazardous or special waste collection point and in accordance to applicable regulations.

6.3 Methods and Materials for Containment and Cleaning Up: Neutralize spills with soda ash or lime slurry. Collect and dispose slurry waste to hazardous or special waste collection point and in accordance to applicable regulations. Never neutralize with a strong alkali material.

7. Handling and Storage

7.1 Precautions for Safe Handling: Do not loosen or remove primary white bottle cap. Remove only red cap to expose dispenser tip. Keep out of reach of children. Do not breathe vapors. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Ensure all equipment (including Personal Protective Equipment) is compatible with all product components.

7.2 Conditions for Safe Storage, Including any Incompatibles:

Storage Class: Acids.

Keep only in original container. Safely lock container in a cool and well ventilated place. Keep container sealed when not in use.

Packaging Material: Plastic. Do not reuse.

Unsuitable Packaging Material: Any glass or metal container. Keep only in original container.

8. Exposure Controls / Personal Protection

8.1 Control Parameters:

Exposure Limits Values

Name	Air Concentration USA ACGIH TLV (ppm)	Air Concentration USA OSHA TWA (mg/m ³)
Hydrofluoric Acid as Fluorides "F"	3	-
Ammonium Bifluoride as Fluorides "F"	-	2.5

8.2 Exposure Controls:

Engineering Measures: Work in a well ventilated area or under a ventilation hood.

8.3 Individual Protection Measures, such as Personal Protective Equipment:

Ensure all equipment (including Personal Protective Equipment) is compatible with all product components.

Eye Protection: Wear closed safety glasses or chemical splash goggles.

Skin Protection: Wear protective clothing and protective apron.

Respiratory Protection: Above OELV of "F" wear mask approved for Hydrogen Fluoride.

Hand Protection: Wear protective gloves. Gloves must be inspected prior to use. Replace if worn or damaged. Do not reuse.

Hygiene Measures: Wash thoroughly after handling. Do not smoke, eat or drink in work area.

9. Physical and Chemical Properties

Appearance: Clear Liquid.

Odor: Sharp Odor.

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Odor Threshold: Not Determined.

pH: ≤ 1.0

Melting Point/Freezing Point (°C): Not Applicable.

Initial Boiling Point/Boiling Point Range (°C): Not Applicable.

Flash Point (°C): Not Applicable.

Evaporation Rate: Not Determined.

Flammability (solid, gas): Not Applicable.

Upper/Lower Flammability or Explosive Limits: Not Applicable.

Vapor Pressure: Not Determined.

Vapor Density: Not Determined.

Relative Density (Water = 1): 1.1 at 20°C.

Solubility: Highly soluble in water.

Partition Coefficient: n-Octanol/Water: Not Applicable.

Auto-ignition Temperature: Not Applicable.

Viscosity: Not Determined.

Explosive Properties: Not Applicable.

Oxidizing Properties: Not Applicable.

10. Stability and Reactivity

10.1 Reactivity: Reaction with metals can potentially release dangerous hydrogen gas.

10.2 Chemical Stability: Stable if used according to specifications.

10.3 Possibility of Hazardous Reactions: Strong alkalis, metals.

10.4 Conditions to Avoid: Avoid contact with strong alkalis, metals and high temperatures.

10.5 Incompatible Materials: Strong alkalis, metals, glass.

10.6 Hazardous Decomposition Products: Decomposition emits highly corrosive fluoride fumes.

11. Toxicological Information

Acute Toxicity: Data not available for mixture.

Toxicological Information on Ingredients:		Acute Toxicity		
Name	CAS No.	Oral LD50 (Rat - mg/Kg)	Inhalation LC50 (Rat – ppm)	Dermal LD50 (Rabbit – mg/Kg)
Hydrofluoric Acid as Fluorides “F”	7664-39-3	-	5100 ppm / 5minutes 1300 ppm / 60minutes	2% HF solution corrosive to rabbit skin with 1 hour exposure, but not with 1 minute exposure
Ammonium Fluoride*	1341-49-7	32	-	-

*LD₅₀ (Intraperitoneal -Rat)

Skin Corrosion/Irritation: May cause severe skin burns which may not be immediately painful or visible and may penetrate skin and damage underlying tissue.

Serious Eye Damage/Eye Irritation: Causes severe permanent eye damage.

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Respiratory or Skin Sensitization: No Information Available.

Germ Cell Mutagenicity: No Information available.

Carcinogenicity:

Hydrofluoric Acid: not listed by NTP, IARC, OSHA, or ACGIH as a carcinogen.
Fluorides as “F”: unclassifiable as carcinogenicity to humans (IARC-3).

Reproductive Toxicity: No Information available.

Specific Target Organ Toxicity – Single Exposure: No Data Available

Specific Target Organ Toxicity – Repeated Exposure: No Data Available

Aspiration Hazard: No Data Available

Inhalation: Inhalation of “F” vapors of 2 mg/m³ or more may cause damage to lungs, respiratory system and pulmonary edema.

Subchronic/Chronic Toxicity: Based on Hydrofluoric Acid supplier: “Prolonged exposure can cause bone and joint changes in humans (Fluorosis – increased bone density and mottling of teeth).”

12. Ecological Information

12.1 Ecotoxicity:

Aquatic Toxicity: Based on Hydrofluoric Acid supplier: “60 ppm*/fish/lethal/fresh water. (*Time period not specified)”.

12.2 Persistence and Degradability: Not applicable to inorganic substances or materials.

12.3 Bioaccumulative Potential: There is no evidence to suggest bioaccumulation will occur.

12.4 Mobility in Soil: Accidental spillage may lead to penetration in the soil and groundwater. However, there is no evidence that this would cause adverse ecological effects.

12.5 Results of PBT and vPvB Assessment: This product does not contain PBT or vPvB substances.

12.6 Other Adverse Effects: No data available.

13. Disposal Considerations

13.1 Disposal Methods:

Product (Any Residual Waste/Unused Product): Dispose of any residual product waste or unused product to hazardous or special waste collection point and in accordance to applicable regulations. Avoid release to the environment.

Packaging (White Plastic): After use, close empty bottle, and dispose of to hazardous or special waste collection point and in accordance to applicable regulations.

14. Transport Information

14.1 UN-Number: UN1790

14.2 UN Proper Shipping Name: Hydrofluoric Acid Solution

14.3 Transport hazard class(es): 8 (6.1)

14.4 Packing group: PG II

14.5 Environmental Hazard(s): Marine Pollutant: No

14.6 Special Precaution to User: See section 7.

14.7 Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code: Not Applicable.

15. Regulatory Information

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15.1 Safety Health and Environmental Regulations/Legislation Specific for the Substance or Mixture:

U.S. Regulations:

Inventory Status: All components are on TSCA.

U.S. Superfund Amendments and Reauthorization Act (SARA) Title III:

SARA (311/312) Hazard Categories: Acute/Chronic.

SARA 313: This product contains the following SARA 313 Toxic Release Chemicals.

Chemical Name	CAS Number	Concentration
Hydrofluoric Acid	7664-39-3	7% ≤ C ≤ 12%
Ammonium Bifluoride	1341-49-7	10% ≤ C ≤ 16%

16. Further Information

First Aid Reference: Honeywell HF Medical Book - Recommended Medical Treatment for Hydrofluoric Acid Exposure (Most Recent Edition).

Abbreviations and Acronyms:

ACGIH = American Conference of Governmental Industrial Hygienists.

C = Concentration (weight percent).

DOT = Department of Transportation (United States).

IMDG = International Maritime Dangerous Goods Code.

IARC = International Agency for Research on Cancer.

OSHA = Occupational Safety & Health Administration.

PBT = Persistent, Bioaccumulative and Toxic Substances.

ppm = parts per million.

OELV = Occupational Exposure Limits Values.

TLV = Threshold Limit Values.

TSCA = Toxic Substance Control Act.

TWA = Time-Weighted Average.

vPvB = very Persistent and very Bioaccumulative Substances.

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