Safety Data Sheet

Issue Date: 09-Sep-2014 **Revision Date:** 09-Sep-2015 **Version** 2

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier
Product Name United 688 HOT SHOT

Other means of identification
SDS # UNITED-688

UN/ID No UN3264

Recommended use of the chemical and restrictions on use
Recommended Use Heavy Duty Descaler/Renovator.
Uses Advised Against For industrial and institutional use only.

Details of the supplier of the safety data sheet
Supplier Address
United Laboratories, Inc.
320 37th Avenue
St. Charles, IL 60174
www.unitedlabsinc.com
www.unitedlabsinc.ca

Emergency Telephone Number
Company Phone Number 800-323-2594 (to reorder)
Emergency Telephone (24 hr) INFOTRAC 1-800-535-5053 (North America)
1-352-323-3500 (International)

2. HAZARDS IDENTIFICATION

Appearance Clear liquid **Physical State** Liquid **Odor** Slight acidic

Classification

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1

Signal Word
Danger

Hazard Statements
Harmful if swallowed. Causes severe skin burns and eye damage.

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe dust/fume/gas/mist/vapors/spray. 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: Call a poison center or doctor/physician if you feel unwell. Rinse mouth. Do not induce vomiting.

Precautionary Statements - Storage

Store locked up.

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Ammonium bifluoride	1341-49-7	10-20
Hydrochloric acid	7647-01-0	1-10

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures

General Advice Immediately call a poison center or doctor/physician.

Eye Contact Flush eyes thoroughly with boric acid followed by cold water for 15 minutes. Hold eyelids open to ensure thorough rinsing. Immediately call a poison center or doctor/physician.

Skin Contact Alkaline soap may be used. Wash affected areas thoroughly with soap and water. If irritation develops, seek medical attention.

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Immediately call a poison center or doctor/physician.

Ingestion Rinse mouth. Do not induce vomiting. Call a physician or poison control center immediately.

Most important symptoms and effects

Symptoms Harmful if swallowed. Causes severe skin burns and eye damage. May cause blindness. May be absorbed through the skin with possible systemic effects. Vapors or mists may cause damage to the upper respiratory tract and to the lung tissue. May cause severe burns, intense vomiting and diarrhea, muscle weakness and/or tremors may follow CNS depression leading to shock and cardiac failure. Chronic overexposure to hydrofluoric acid may result in weight loss, brittle bones, anemia, weakness, stiffness of joints and mottled teeth.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Unless vomiting has been extensive, perform gentle gastric lavage with lime water or 1% solution calcium chloride or milk. Then give lime water of aluminum hydroxide gel orally at frequent intervals.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Water. Dry chemical. Carbon dioxide (CO2).

Unsuitable Extinguishing Media No information available.

Specific Hazards Arising from the Chemical
None known.

Hazardous Combustion Products When strongly heated, as in a fire, this product may produce carbon monoxide, carbon dioxide, hydrogen chloride, hydrofluoric acid, ammonia and other toxic 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. All containers should be cooled with water to prevent vapor pressure build up.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Use personal protective equipment as required.

Methods and material for containment and cleaning up

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

Methods for Clean-Up Small spills: Spills up to one gallon may be diluted with plenty of water and flushed to sewage drain. Rinse area thoroughly. Small spills: Soak up with an inert absorbent and place in designated disposal container.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice. Wash face, hands, and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe dust/fume/gas/mist/vapors/spray. Wear protective gloves/protective clothing and eye/face protection.

Conditions for safe storage, including any incompatibilities

Storage Conditions Store locked up. Keep containers tightly closed when not in use. Store in a cool, dry well-ventilated area. Do not allow this product to freeze, as the container may split or rupture.

Incompatible Materials Do not mix this product with other cleaning materials, especially acids or strong oxidizing agents such as bleach.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ammonium bifluoride 1341-49-7	TWA: 2.5 mg/m^3 F	TWA: 2.5 mg/m^3 F TWA: 2.5 mg/m^3 dust (vacated) TWA: 2.5 mg/m^3	TWA: 2.5 mg/m^3 F
Hydrochloric acid 7647-01-0	Ceiling: 2 ppm	(vacated) Ceiling: 5 ppm (vacated) Ceiling: 7 mg/m^3 Ceiling: 5 ppm Ceiling: 7 mg/m^3	IDLH: 50 ppm Ceiling: 5 ppm Ceiling: 7 mg/m^3
Ammonium fluoride 12125-01-8	TWA: 2.5 mg/m^3 F	TWA: 2.5 mg/m^3 F TWA: 2.5 mg/m^3 dust (vacated) TWA: 2.5 mg/m^3	TWA: 2.5 mg/m^3 F

Appropriate engineering controls

Engineering Controls Provide adequate ventilation. Mechanical ventilation recommended when handling in enclosed, tight spaces.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Wear chemical goggles.

Skin and Body Protection Chemical resistant protective gloves.

Respiratory Protection Ensure adequate ventilation, especially in confined areas. In case of inadequate ventilation or risk of inhalation of vapors, use suitable respiratory equipment.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State Liquid
Appearance Clear liquid
Color Clear
Odor Slight acidic

Property	Values	Remarks • Method
pH	1-2	
Melting Point/Freezing Point	No information available.	
Boiling Point/Boiling Range	100 °C / 212 °F	
Flash Point	None	
Evaporation Rate	No information available.	
Flammability (Solid, Gas)	Liquid- Not applicable	
Upper Flammability Limits	No information available.	
Lower Flammability Limit	No information available.	
Vapor Pressure	No information available.	
Vapor Density	No information available.	
Specific Gravity	1.07	(Water = 1)
Water Solubility	Completely soluble	
Solubility in other solvents	No information available.	
Partition Coefficient	No information available.	
Auto-ignition Temperature	No information available.	
Decomposition Temperature	No information available.	
Kinematic Viscosity	No information available.	
Dynamic Viscosity	No information available.	

Explosive Properties	No information available.
Oxidizing Properties	No information available.
VOC Content	None.

10. STABILITY AND REACTIVITY

Reactivity
Not reactive under normal conditions.

Chemical Stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
Under normal conditions of storage and use, hazardous polymerization will not occur.

Conditions to Avoid
Keep out of reach of children.

Incompatible Materials
Do not mix this product with other cleaning materials, especially acids or strong oxidizing agents such as bleach.

Hazardous Decomposition Products
When strongly heated, as in a fire, this product may produce oxides of carbon, hydrogen chloride, hydrofluoric acid and ammonia.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact	Causes severe eye damage.
Skin Contact	Causes severe skin burns.
Inhalation	Do not inhale.
Ingestion	Harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Ammonium bifluoride 1341-49-7	130 mg/kg (Rat)	-	-
Hydrochloric acid 7647-01-0	700 mg/kg (Rat)	> 5010 mg/kg (Rabbit)	3124 ppm (Rat) 1 h
Alcohol Ethoxylate 68439-46-3	1378 mg/kg (Rat)	> 2 g/kg (Rabbit)	-

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 Group 3 IARC components are "not classifiable as human carcinogens".

Chemical Name	ACGIH	IARC	NTP	OSHA
Ammonium bifluoride 1341-49-7		Group 3		

Hydrochloric acid 7647-01-0		Group 3		

Legend

IARC (International Agency for Research on Cancer)

Group 3 IARC components are "not classifiable as human carcinogens"

Numerical measures of toxicity

No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

No information available.

Persistence/Degradability

No information available.

Bioaccumulation

No information available.

Mobility

No information available.

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

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. (Ammonium hydrogen difluoride, hydrochloric acid)
Hazard Class 8
Packing Group II

IATA

UN/ID No UN3264
Proper Shipping Name Corrosive liquid, acidic, inorganic, n.o.s. (Ammonium hydrogen difluoride, hydrochloric acid)
Hazard Class 8
Packing Group II

IMDG Corrosive liquid, acidic, inorganic, n.o.s. (Ammonium hydrogen difluoride, hydrochloric acid)

UN/ID No UN3264
Hazard Class 8
Packing Group II

15. REGULATORY INFORMATION

International Inventories

TSCA Listed.

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

US Federal Regulations

CERCLA

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Ammonium bifluoride 1341-49-7	100 lb		RQ 100 lb final RQ RQ 45.4 kg final RQ
Hydrochloric acid 7647-01-0	5000 lb	5000 lb	RQ 5000 lb final RQ RQ 2270 kg final RQ

SARA 313

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Ammonium bifluoride - 1341-49-7	1341-49-7	10-20	1.0
Hydrochloric acid - 7647-01-0	7647-01-0	1-10	1.0
Ammonium fluoride - 12125-01-8	12125-01-8	<1	1.0

CWA (Clean Water Act)

Component	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Ammonium bifluoride 1341-49-7 (10-20)	100 lb			X
Hydrochloric acid 7647-01-0 (1-10)	5000 lb			X

US State Regulations

California Proposition 65

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Ammonium bifluoride 1341-49-7	X	X	X
Hydrochloric acid 7647-01-0	X	X	X
Ammonium fluoride 12125-01-8	X	X	X

16. OTHER INFORMATION

NFPA	**Health Hazards**	**Flammability**	**Instability**	**Special Hazards**
	No information available	No information available	No information available	No information available
HMIS	**Health Hazards**	**Flammability**	**Physical Hazards**	**Personal Protection**
	3	0	1	N+P

Issue Date: 09-Sep-2014
Revision Date: 09-Sep-2015
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