



MATERIAL SAFETY DATA SHEET

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To Reorder Call:
 800-323-2594

1. PRODUCT AND COMPANY IDENTIFICATION

FOR MEDICAL AND TRANSPORTATION EMERGENCIES
 24 Hour INFOTRAC (US and CANADA): **800-535-5053**

PRODUCT NAME
 UNITED 688 HOT SHOT

USE/DESCRIPTION
 Heavy Duty Descaler/Renovator

REVISION DATE
 October 6, 2009

HMIS III HEALTH (0 = Maximum Safety) 3

Always follow Label Directions and Cautions.

* Chronic 2 Moderate
 4 Severe 1 Slight
 3 Serious 0 Minimal
See Hazards Identification Section of this MSDS for more detailed information.

FLAMMABILITY (0 = Maximum Safety) 0

Susceptibility of Material to Burning.

4 Extremely flammable. 1 Must be preheated
 3 Ignites at normal temperature. to burn.
 2 Ignites when moderately heated. 0 Will not burn.

PHYSICAL HAZARD (0 = Maximum Safety) 1

Susceptible to Release of Energy.

4 May detonate-vacate area if materials are exposed to fire. 2 Violent chemical change possible-use hose stream from distance
 3 Strong shock of heat may detonate-use monitors from behind explosion resistant barriers. 1 Unstable if heated-use precaution.
0 Normally stable.

PERSONAL PROTECTION: p & n



2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients	CAS#	%Range	ACGIH (TLV-TWA)	OSHA (PEL-TWA)	LD50 (Species/Route)	LC50 (Species)
Hydrochloric acid	7647-01-0	1-5	C: 5 ppm C: 7.5mg/m ³	C: 5 ppm C: 7.5mg/m ³	900 mg/kg (Rabbit/oral)	1108 ppm 1 hr Mouse
Hydrofluoric acid	7664-39-3	5-10	C: 3 ppm C: 2.3mg/m ³	C: 3 ppm C: 2.3mg/m ³	NE	1276 ppm 1hr Rat

3. HAZARDS IDENTIFICATION

Eyes: Causes severe burns. May cause blindness. Vapors may cause superficial or deep burns of the skin and mucous membranes of the digestive and/or respiratory tract.

Skin: Causes severe burns and possibly deep ulcers. Burns may not be felt immediately. May be absorbed through skin resulting in systemic poisoning.

Inhalation: Vapors or mist may cause irritation to the throat, mucous membranes and upper respiratory tract. May cause damage to the lung tissue depending upon the extent of exposure.

Ingestion: May cause severe burns, intense vomiting and diarrhea, muscle weakness and/or tremors may follow CNS depression leading to shock and cardiac failure. May be fatal. Chronic overexposure to hydrofluoric acid may result in weight loss, brittle bones, anemia, weakness, stiffness of joints and mottled teeth.

4. FIRST AID MEASURES

Eyes: Flush eyes thoroughly with boric acid followed by cold water for 15 minutes. Hold eyelids open to ensure thorough rinsing. Call a physician or poison center immediately.

Skin: Wash all exposed areas copiously with cold water. Alkaline soap may be used. If irritation develops, call a physician or poison center.

If Inhaled: Remove to fresh air; if breathing is difficult, have a trained person administer oxygen. Get medical attention immediately. If breathing stops, give CPR.

If Swallowed: DO NOT induce vomiting. Call a physician or poison center IMMEDIATELY. NOTE 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 or aluminum hydroxide gel orally at frequent intervals.

5. FIRE FIGHTING MEASURES

Flash Point (TCC): None

Explosive Limits: Lower (LEL): ND Upper (UEL): ND

Flame Projection (Aerosol): Extremely NA

Hazardous Products of Combustion: When strongly heated, as in a fire, this product may produce carbon monoxide, carbon dioxide, hydrogen chloride, hydrofluoric acid, ammonia and other toxic fumes.

Fire and Explosion Hazards: None known.

Extinguishing Media: Water, Chemical, Carbon dioxide.

Fire Fighting Instructions: Wear self-contained breathing apparatus w/full protective clothing. Containers should be cooled with water to prevent vapor pressure build up.

6. ACCIDENTAL RELEASE MEASURES

Small Spills: Spills up to 1 gallon may be diluted with plenty of water and flushed to sewage drain. Rinse area thoroughly.
Large Spills: Soak up with an inert absorbent and place in designated disposal container. Rinse area thoroughly.

7. HANDLING AND STORAGE

Keep containers tightly closed when not in use. Store in a cool, dry, well ventilated area. Do not let containers freeze, as they may split or rupture. Do not mix with other chemicals or cleaners.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eyes: Wear chemical safety goggles.

Skin: Chemical resistant gloves.

Respiratory: To avoid breathing fumes, use NIOSH-approved respirator.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: 212°F/100°C **Specific Gravity:** 1.07 (H₂O=1) **Vapor Pressure:** ND **Melting Point:** ND
Vapor Density: ND **Evaporation Rate:** ND **Solubility in Water:** Complete **pH:** 1-2
Appearance and Odor: Clear liquid with slight acidic scent.

10. STABILITY AND REACTIVITY

Hazardous Polymerization: Will not occur.

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

Chemical Stability: Stable

Incompatibility: Do not mix this product with other cleaning chemicals, especially strong base or oxidizing agents such as bleach.

11. TOXICOLOGICAL INFORMATION

Carcinogenicity (NTP/IARC/OSHA): None

California Proposition 65: Does this product contain chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm? None

12. ECOLOGICAL INFORMATION

ND

13. DISPOSAL CONSIDERATIONS

Consult your local, state, and federal regulations for proper disposal guidelines. Disposal regulations may be different for each state and/or locality.

14. TRANSPORT INFORMATION

DOT: Available upon request

TDG: Available upon request

UN: Available upon request

15. REGULATORY INFORMATION

VOC (Volatile Organic Compounds): None

TSCA (Toxic Substances Control Act): Listed

SARA Title III Section 302 EHS: ND

SARA Title III Section 311/312: ND

SARA Title III Section 313 Toxic Chemicals: Hydrofluoric acid CAS# 7664-39-3; Hydrochloric acid CAS# 7647-01-0

WHMIS Classification:

This product has been classified in accordance with the hazard criteria of the CPR (Controlled Products Regulations/ WHMIS) and the MSDS contains all the information required by the CPR.

16. OTHER INFORMATION

Read and follow all label directions and precautions before using this product. These products are intended for industrial and institutional use only. NOT FOR HOUSEHOLD USE OR RESALE. KEEP OUT OF REACH OF CHILDREN.

UNITED 688 HOT SHOT

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