

SAFETY DATA SHEET

GHS format

SECTION 1 IDENTIFICATION**Product Name:** Hydro-Foam Concentrate, Hydro-Balance**Product Number(s):** H-501, H-505, H-555**Product Use:** Condenser Coil Cleaner**Restrictions on use:** Do not use on evaporator coils. Outdoor use only.**Distributed by:** Hydro-Balance Corporation**Manufactured by:** North American Research Corporation

P.O. Box 1318

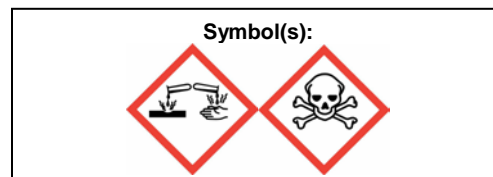
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Telephone Numbers: (972) 492-1800, (800) 527-7520, Fax (972) 394-6755**Emergencies:** Infotrac (24 hours, everyday) (800) 535-5053 (US & Canada) 1 (352) 323-3500 (International)**SECTION 2 HAZARD(S) IDENTIFICATION**

Classification:	Corrosive to metals	Category 1
	Acute toxicity, oral	Category 3
	Acute toxicity, dermal	Category 2
	Acute toxicity, inhalation	Category 3
	Skin corrosion/irritation	Category 1A
	Serious eye damage/eye irritation	Category 1

**Signal Word:** Danger**Hazard statement(s):** May be corrosive to metals. Toxic if swallowed or inhaled. Fatal in contact with skin. Causes severe skin burns and eye damage.**Precaution(s):****Prevention:** Keep only in original packaging. Wash face, hands, and any exposed skin thoroughly after handling. Do not eat, drink, or smoke when using this product. Do not get in eyes, on skin, or on clothing. Wear protective gloves, protective clothing, eye protection, and face protection. Do not breathe dusts, mists, vapors, or spray. Use only outdoors or in a well-ventilated area.**Response:** Absorb spillage to prevent material damage. Immediately call a POISON CENTER/doctor. Specific treatment (see Section 4 on this SDS).
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
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 person to fresh air and keep at rest in a position comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.**Storage:** Store locked up. Store in a well-ventilated place. Keep container tightly closed.**Disposal:** Dispose of contents and container in accordance with all local, regional, and national regulations.**Other Hazards:** Causes severe burns which may not be immediately painful or visible. May cause hypocalcemia (depletion of calcium in the body) which may be fatal. Specialized medical treatment is required for all exposures. Mix only with water. Do not mix with any other product or chemical. Will react with some metals, such as aluminum, tin, or zinc, to form flammable hydrogen gas.**SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS**

Ingredient Name	CAS Registry No.	Weight %
Hydrofluoric acid	7664-39-3	8 – 10
Phosphoric acid	7664-38-2	5 – 8

If the specific chemical identity and/or the exact percentage of an ingredient is not specified, the information has been withheld as a trade secret.

SECTION 4 FIRST-AID MEASURES

Immediately call a POISON CENTER/doctor.

Inhalation: Remove to fresh air. Keep patient warm and at rest. Get competent medical attention immediately. If breathing has stopped, start artificial respiration at once. An authorized person should administer oxygen to a victim who is having difficulty breathing, until the victim is able to breathe easily by himself. Calcium gluconate, 2.5% in normal saline may be given by nebulizer with oxygen. Do not give stimulants unless instructed to do so by a physician. Victim should be examined by a physician and held under observation for at least 24 hours.**Skin contact:** Remove the victim from the contaminated area and immediately wash the burned area with plenty of water for a minimum of 15 minutes. Limit washing to 5 minutes if treatment specific for HF exposure is available. Remove all contaminated clothing while washing continuously. After thorough washing for at least 5 minutes, the burned area should be immersed in a solution of 0.13% iced aqueous Benzalkonium Chloride until pain is relieved. As an alternate first aid treatment, 2.5% calcium gluconate gel may be continuously massaged into the burn area until the pain is relieved. For burns not responsive to topical treatment (as measured by pain being present for longer than 30 minutes) a physician may inject 2.5% - 5% aqueous calcium gluconate beneath, around and in the burned area. Use of local anesthetics is not recommended, as reduction in pain is an indicator of effectiveness of treatment.

Eye contact: Immediately flush the eyes for at least 15 minutes with large amounts of gently flowing water. Hold the eyelids open and away from the eye during irrigation to allow thorough flushing of the eyes. Do not use the benzalkonium chloride (Zephiran) solutions described for skin treatment. If the person is wearing contact lenses, the lenses should be removed, if possible. However, flushing with water should not be interrupted, and the lenses should be removed by a person who is qualified to do so. If sterile 1% calcium gluconate solution is available, water washing may be limited to 5 minutes, after which the 1% calcium gluconate solution should be used to irrigate the eye using a syringe or a continuous irrigation device. Take the victim to a doctor, preferably an eye specialist, as soon as possible. Ice water compresses may be applied to the eyes while transporting the victim to the doctor. If a physician is not immediately available, apply one or two drops of 0.5% tetracaine hydrochloride, 0.5% proparacaine, or other aqueous, topical ophthalmic anesthetic and continue irrigation. Use no other medications unless instructed to do so by a physician. Rubbing of the eyes is to be avoided.

Ingestion: Have the victim drink several large glasses of water or milk to dilute the acid. Do not induce vomiting. Do not give emetics or baking soda. Never give anything by mouth to an unconscious person. Give several glasses of milk or several ounces of milk of magnesia, any calcium containing antacid or grind up and administer up to 30 antacid tablets with water. The calcium or magnesium in these compounds may act as an antidote; however this has not been supported in the literature. Get immediate medical attention. Ingestion of HF is a life-threatening emergency.

Most important symptoms/effects: Skin burns and eye burns.

Indication of immediate medical attention and special treatment needed, if necessary:

Notes to physician:

Specific treatments: For large skin area burns (totaling greater than 25 square inches), for ingestion and for significant inhalation exposure, severe systemic effects may occur. Monitor and correct for hypocalcemia, cardiac arrhythmias, hypomagnesemia and hyperkalemia. In some cases hemodialysis may be indicated. For certain burns, especially of the digits, use of intra-arterial calcium gluconate may be indicated. For inhalation exposures, treat as chemical pneumonia. Monitor for hypocalcemia. 2.5% calcium gluconate in normal saline by nebulizer or by intermittent positive pressure breathing with 100% oxygen may decrease pulmonary damage. Bronchodilators may also be administered. A booklet titled "Recommended Medical Treatment for Hydrofluoric Acid Exposure" is available from the Honeywell HF website: <http://www.HFacid.com>.

SECTION 5 FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media:

Water spray, foam, carbon dioxide (CO₂), dry chemical or as suitable for surrounding fire.

Specific hazards arising from the chemical:

Will react with some metals, such as aluminum, tin, or zinc, to form flammable hydrogen gas.

Special protective equipment for fire-fighters: Use appropriate equipment for surrounding fire.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precaution, protective equipment and emergency procedures: Put on appropriate personal protective equipment (see section 8). Ensure all PPE is compatible with hydrofluoric acid (HF). Immediately evacuate personnel to safe areas.

Methods and materials for containment and clean-up: Soak up with inert, absorbent material. Neutralize acidity with an appropriate alkaline material such as calcium carbonate (limestone) / calcium hydroxide (hydrated lime). Sweep up and shovel into suitable containers for proper disposal. Use a water rinse for final cleanup.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling: Wear appropriate personal protective equipment (PPE) to prevent contact with product. Ensure all PPE is suitable for hydrofluoric acid. Mix only with water. Do not mix with any other product or chemical. Do not breathe vapors, mist, and spray. Use only with adequate ventilation, equivalent to outdoors. **Immediately wash with water any contact or suspected contact with this product.** Wash hands, face, and any exposed skin thoroughly after handling. Launder contaminated clothing before reuse. For commercial and industrial use only by professionals trained in the field of HVACR. Do not spray on electrical connections. Empty container may contain product residue which may exhibit hazards of product. Triple rinse container before proper disposal. Use rinsate to dilute product for use.

Conditions for safe storage, including any incompatibilities: KEEP OUT OF REACH OF CHILDREN. Store locked up. Keep tightly closed in original container. Do not store near potential sources of ignition or incompatible materials. Store in a cool, dry, ventilated area. Protect container against physical damage. Tip: For storage on service truck, place container inside of plastic pail and immobilize pail. See section 10 for incompatible materials.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical name	CAS	OSHA PEL	ACGIH TLV	NIOSH REL
Hydrofluoric Acid	7664-39-3	TWA: 3 ppm as F	2 ppm (C) as F	3 ppm as F
Phosphoric Acid	7664-38-2	TWA: 1 mg/m ³	TWA: 1 mg/m ³	(STEL) 3 mg/m ³

Appropriate engineering controls: Outdoor use only. Good ventilation, equivalent to outdoors should be maintained to control airborne levels.

Individual protection measures (PPE):

Eye protection: Chemical splash goggles and face shield.

Hand protection: Chemical-resistant gloves. Nitrile, neoprene, or other suitable material.

Skin and body protection: If major exposure is possible, wear suitable protective clothing and footwear.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be implemented whenever workplace conditions warrant use of a respirator.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Red liquid	U/L flammability or explosive limits	Not determined
Odor	Acidic/pungent odor	Vapor pressure	Not determined
Odor threshold	Not determined	Vapor density	Not determined
pH	1	Relative density (specific gravity)	1.08
Melting point/freezing point	Not determined	Solubility(ies)	100% in water
Initial boiling point and boiling range	Not determined	Partition coefficient: n-octanol/water	Not determined
Flash point	Not flammable	Auto-ignition temperature	Not determined
Evaporation rate	Not determined	Decomposition temperature	Not determined
Flammability (solid, gas)	Not determined	Viscosity	Not determined

SECTION 10 STABILITY AND REACTIVITY

Reactivity: Not reactive under normal conditions.

Chemical stability: Stable under normal conditions.

Possibility of hazardous reactions: Will react with some metals, such as aluminum, tin, or zinc, to form flammable hydrogen gas.

Conditions to Avoid: Incompatible materials, excessive heat and fire.

Incompatible materials: Will react with some metals, such as aluminum, tin, or zinc, to form flammable hydrogen gas. Contact with some oxides, and alkalis causes strong exothermic reactions.

Hazardous decomposition products: No hazardous decomposition products are known.

SECTION 11 TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Eye contact: Causes severe eye damage.

Skin contact: Fatal in contact with skin. Causes severe skin burns.

Inhalation: Harmful if inhaled.

Ingestion: Toxic if swallowed. Causes burns / serious damage to mouth, throat, and stomach.

Sensitization: No known effects.

Numerical measure of toxicity, component information:

Chemical name	CAS	Oral LD ₅₀	Dermal LD ₅₀	Inhalation LC ₅₀
Hydrofluoric acid	7664-39-3	–	–	2240 ppm ,1 hr (rat)
Phosphoric acid	7664-38-2	1530 mg/kg (rat)	2730 mg/kg (rabbit)	–

CHRONIC:

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

Mutagenicity: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Reproductive Toxicity: No data available to indicate either product or components present at greater than 0.1% that may cause reproductive toxicity.

Teratogenicity: No data available to indicate product or any components contained at greater than 0.1% may cause birth defects.

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity: No information available.

Persistence and degradability: No information available.

Bioaccumulation potential: No information available.

Mobility in soil: No information available.

Other adverse effects: No information available.

SECTION 13 DISPOSAL CONSIDERATIONS

Unused product: This product, as sold, if discarded or disposed, is a hazardous waste according to federal regulations. Dispose of container and contents in accordance with local, regional, national and international regulations.

Contaminated containers or packaging: Do not reuse empty containers. Triple rinse containers and offer for recycle where available. Dispose of packaging or containers in accordance with local, regional, national and international regulations.

RCRA Hazard Class: D002 Corrosive, U134 hydrofluoric acid.

SECTION 14 TRANSPORT INFORMATION

Agency	Proper Shipping Name	UN Number	Packing Group	Hazard Class
DOT (ground), IMDG	Corrosive liquid, acidic, inorganic, n.o.s. (containing hydrofluoric and phosphoric acid)	UN3264	II	8
IATA	Not suitable for air shipment as packaged from the factory.			

SECTION 15 REGULATORY INFORMATION

TSCA: All components of this product are on the U.S. Toxic Substances Control Act (TSCA) Chemical Substances Inventory or are exempt.

CERCLA: Hydrofluoric acid (7664-39-3); RQ 100 lbs.
Phosphoric acid (7664-38-2); RQ 5000 lbs.

SARA TITLE III:

Section 311/312 Hazard Category: Acute: Yes Chronic: Yes Fire: No Reactive Hazard: No

Section 302/313 Reportable Ingredients: Hydrogen Fluoride (7664-39-3)

CALIFORNIA (Proposition 65): No reportable ingredients.

SECTION 16 OTHER INFORMATION

Date Prepared: May 08, 2015 **Replaces:** May 29, 2013

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