

MATERIAL SAFETY DATA SHEET**SECTION 1 CHEMICAL PRODUCT AND COMPANY INFORMATION**

Product Name: Hydro-Balance Hydro-Foam Concentrate
 Product Number(s): H-501, H-505, H-555
 Product Use: Condenser coil cleaner
 Company Name: North American Research Corporation
 P.O. Box 1318
 Lewisville, TX 75067

Date Prepared May 15, 2009
 Replaces Feb. 28, 2007

Telephone Numbers: (972) 492-1800, (800) 527-7520, Fax (972) 394-6755
 Emergencies: Infotrac (800) 535-5053 (24 hours, everyday)

SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS

OSHA Hazardous Components (29 CFR 1910.1200):

| | CAS Registry No. | OSHA PEL | ACGIH TLV | Other Limits | % (Optional) |
|-------------------|---------------------|---------------------|---------------------|----------------------------|-----------------|
| Hydrofluoric Acid | 7664-39-3 | 3 ppm as F | 3 ppm (C) as F | 6 ppm as F | < 15 |
| Phosphoric Acid | 7664-38-2 | 1 mg/m ³ | 1 mg/m ³ | (STEL) 3 mg/m ³ | < 15 |

SECTION 3 HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW:**

POISON! DANGER! CORROSIVE. EXTREMELY HAZARDOUS LIQUID AND VAPOR. CAUSES SEVERE BURNS WHICH MAY NOT BE IMMEDIATELY PAINFUL OR VISIBLE. MAY BE FATAL IF SWALLOWED OR INHALED. LIQUID AND VAPOR CAN BURN SKIN, EYES AND RESPIRATORY TRACT. CAUSES BONE DAMAGE. REACTION WITH CERTAIN METALS GENERATES FLAMMABLE AND POTENTIALLY EXPLOSIVE HYDROGEN GAS.

POTENTIAL HEALTH EFFECTS

Exposure to hydrofluoric acid can produce harmful health effects that may not be immediately apparent.

EYE CONTACT:

Corrosive to the eyes. Symptoms of redness, pain, blurred vision, and permanent eye damage may occur.

SKIN CONTACT:

Corrosive to the skin. Skin contact causes serious skin burns which may not be immediately apparent or painful. Symptoms may be delayed 8 hours or longer. The fluoride ion readily penetrates the skin causing destruction of deep tissue layers and even bone.

INHALATION:

Severely corrosive to the respiratory tract. May cause sore throat, coughing, labored breathing and lung congestion/inflammation.

INGESTION:

Corrosive. May cause sore throat, abdominal pain, diarrhea, vomiting, severe burns of the digestive tract, and kidney dysfunction.

CHRONIC EXPOSURE:

Intake of more than 6 mg of fluorine per day may result in fluorosis, bone and joint damage. Hypocalcemia and hypomagnesemia can occur from absorption of fluoride ion into blood stream.

AGGRAVATION OF PRE-EXISTING CONDITIONS:

Persons with pre-existing skin disorders, eye problems, or impaired kidney or respiratory function may be more susceptible to the effects of this substance.

CARCINOGENICITY: NTP? No IARC Monographs? No OSHA Regulated? No

SECTION 4 FIRST-AID MEASURES**EYE CONTACT:**

Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting lower and upper eyelids occasionally. See a physician immediately.

SKIN CONTACT:

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician immediately. Wash clothing before reuse. Do not wear contaminated clothing. May produce effects that are not immediately painful or visible.

INHALATION:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately.

INGESTION:

If swallowed, DO NOT induce vomiting. Give large quantities of water or several glasses of milk with milk of magnesia. Never give anything by mouth to an unconscious person. Get medical attention immediately.

SECTION 5 FIRE-FIGHTING MEASURES

FLASHPOINT: Not flammable METHOD: Not applicable

FLAMMABLE LIMITS: LEL: Not applicable UEL: Not applicable

AUTOIGNITION TEMP: Not applicable

GENERAL HAZARD:

Not considered to be a fire hazard. Fire may produce poisonous or irritating gases.

FIRE EXTINGUISHING MEDIA:

Keep upwind of fire. Use water or carbon dioxide on fires in which Hydrofluoric Acid is involved. Halon or foam may also be used. In case of fire, the sealed containers can be kept cool by spraying with water.

SPECIAL INFORMATION:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Avoid getting water in tanks or drums; water can cause generation of heat and spattering. In contact with air, the acid gives off corrosive fumes which are heavier than air.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Notify safety personnel, provide adequate ventilation, and remove ignition sources since hydrogen may be generated by reactions with metals. Wear appropriate personal protective equipment as specified in Section 8. Do not flush to sewers or waterways.

Spills: Evacuate the danger area. Apply magnesium sulfate (dry) to the spill area. Follow up with inert absorbent and add soda ash or magnesium oxide and slaked lime. Collect in appropriate plastic containers and save for disposal. Wash spill site with soda ash solution. NOTE: Porous materials (concrete, wood, plastic, etc.) will absorb HF and become a hazard for an indefinite time.

Such spills should be cleaned and neutralized immediately. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities.

SECTION 7 STORAGE AND HANDLING

For professional, industrial, and institutional use only by trained personnel. Outdoor use only. Read entire label before use. Keep Out of Reach of Children. Always wash thoroughly after use and before eating, drinking, or using the restroom.

Keep in a tightly closed container. Protect from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture, incompatibilities, and direct sunlight. Corrosive to mild steel. Store in original containers. Do not wash out container and use it for other purposes. Containers of this material may be hazardous when empty since they retain product residue; observe all warnings and precautions listed for the product.

STORAGE TEMPERATURE:

Ambient

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS:

For well ventilated, outdoor use only. Use NIOSH / MSHA approved respirator if concentrations are above exposure limits.

PERSONAL PROTECTION:

Use chemical safety goggles and/or a full face shield, protective gloves (neoprene preferred), and other impervious clothing including boots, apron, or coveralls when using this product. Maintain eyewash fountain and quick-drench facilities in the work area. Immediately wash with water any suspected contact with this product and follow first aid measures.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Red liquid. Acidic, pungent odor.

SPECIFIC GRAVITY: 1.08

VAPOR PRESSURE: Not determined

VAPOR DENSITY: Not determined

SOLUBILITY IN WATER: Complete

pH: 1

BOILING POINT: 150°F

MELTING POINT: Not applicable

EVAPORATION RATE (Butyl Acetate = 1): Not determined

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Stable

HAZARDOUS POLYMERIZATION: Will not occur.

INCOMPATIBILITY (Materials to Avoid): Hydrofluoric acid is incompatible with arsenic trioxide, phosphorus pentoxide, ammonia, calcium oxide, sodium hydroxide, sulfuric acid, vinyl acetate, ethylenediamine, acetic anhydride, alkalis, organic materials, most common metals, rubber, leather, water, strong bases, carbonates, sulfides, cyanides, oxides of silicon, especially glass, concrete, silica, fluorine.

HAZARDOUS DECOMPOSITION PRODUCTS: On contact with metals, liberates hydrogen gas. On heating to decomposition, could yield toxic fumes of fluorides. Attacks glass and other silicon containing compounds. Reacts with silica to produce silicon tetrafluoride, a hazardous colorless gas.

SECTION 11 TOXICOLOGICAL INFORMATION

Phosphoric Acid (7664-38-2): LD50 – lethal dose 50% of test species, 1530 mg/kg, rat.

Hydrofluoric acid (7664-39-3): Inhalation rat LC50: 1276 ppm/1H; Investigated as a mutagen, reproductive effector.

SECTION 12 ECOLOGICAL INFORMATION

No information available.

SECTION 13 DISPOSAL CONSIDERATIONS

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved incinerator or disposed in a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

SECTION 14 TRANSPORT INFORMATION

U.S. Department of Transportation:

Corrosive Liquid, Acidic, Inorganic, N.O.S. (Hydrofluoric Acid) (Phosphoric Acid), 8, UN3264, PG II

SECTION 15 REGULATORY INFORMATION

TSCA: All components of this product are listed on the TSCA inventory.

CERCLA: Phosphoric Acid (7664-38-2); 5000 lbs.

Hydrogen Fluoride (7664-39-3); 100 lbs.

SARA TITLE III:

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

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

SECTION 16 OTHER INFORMATION

NFPA RATING: Health – 4, Flammability – 0, Reactivity – 1

HMIS[®] RATING: Health – 4, Flammability – 0, Reactivity – 1

HMIS[®] ratings are to be used with a fully implemented HMIS[®] program. HMIS[®] is a registered mark of the National Paint and Coatings Association (NPCA).

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