

Acid Coil Cleaner

MSDS# DT301
December 2009

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Manufactured by: Specialty Chemical Manufacturing
Address: A DiversiTech Company
1633-B High Bridge Road
Quincy, FL 32351

EMERGENCY Phone No.: +1.800.255.3924 or +1.813.248.0573 Chem-Tel (Chemical Emergencies Only)
Phone Number for Information: +1.410.863.1323 Fax: +1.410.863.1326
Date Revised: December 2009
Name of Preparer: Anthony Jernigan

SECTION 2. HAZARDOUS INGREDIENTS INFORMATION

INGREDIENT	CAS NO	EINECS NO	OSHA PEL	%	Haz Symbol/R-S Phrases
Water	7732-18-5			75-85	
Hydrofluoric acid	7664-39-3	231-634-8	3 mg(F)/m3	5-10	Xi; R36/38
Sulfuric acid	7664-93-9	231-639-5	1 mg/m3	0-5	Xi; R36/38

SECTION 3. HAZARDS IDENTIFICATION

Route of entry: Inhalation: yes Skin: yes Eyes: yes Ingestion: yes

Health Hazards (acute and chronic): This material is corrosive to skin, eyes, and internal organs.

Signs and Symptoms of Exposure:

Eye Contact: Severe irritation and possible burns.

Skin Contact: Severe irritation and possible chemical burns. Symptoms may be delayed for up to 24 hours.

Inhalation: Mists may irritate respiratory system and cause difficulty breathing.

Ingestion: Solutions and mists are extremely corrosive and toxic. May cause gastric distress, diarrhea, and vomiting. May be fatal if swallowed.

Medical conditions generally aggravated by exposure: Contact may aggravate pre-existing medical conditions such as dermatitis or asthma.

Carcinogenicity: NTP? No. IARC? No. OSHA? No.

SECTION 4. FIRST AID

Emergency and First Aid Measures:

Eye Contact: Contact a physician and start treatment immediately!

1. Immediately flush the eyes with large amounts of gently flowing water for 15 minutes. Hold the eyelids open and away from the eyes during irrigation. Do not put any treatment into eyes unless directed by a physician.

2. Take the victim to a doctor, preferably an eye specialist, as soon as possible after the 15-minute rinse. Ice water compresses should be applied to the eyes while transporting the victim.

3. If a physician is not immediately available, irrigate the eyes with 500-1000 ml irrigation of 1% calcium gluconate aqueous ophthalmic solution followed by an additional 15-minute irrigation. Do not apply any other medication unless instructed to do so by a physician. **AVOID RUBBING EYES.**

Skin Contact: Contact a physician and start treatment immediately!

Note: For skin contact or suspected contact: Move victim immediately under a safety shower or other water source and flush the affected area with large amounts of tempered running water. Speed of washing off the acid is of primary importance. Remove all clothing and footwear while continuing to flush with flowing water. Continue washing for at least 15 minutes.

Get the victim to a physician as quickly as possible after the 15-minute flushing.

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Inhalation: Contact a physician and start treatment immediately!

1. Remove victim to fresh air. Make sure mouth and throat are clear of obstructions. If necessary, support breathing with artificial respiration.
2. Keep victim warm, quiet, and lying down.
3. Do not give stimulants unless directed by physician.
4. Do not allow the victim to become active for 24 hours. During this time, the victim should be examined by a physician and held under observation.

Ingestion: Contact a physician and start treatment immediately!

1. Have the victim drink 3-4 glasses of water as quickly as possible to dilute the product. Do not induce vomiting. Do not give emetics or baking soda. Never give anything by mouth to an unconscious person.
2. Give several glasses of milk or several ounces of milk of magnesia for their soothing effect. The calcium or magnesium in these compounds also acts as an antidote.
3. Get medical attention immediately.

Notes To Physician: Treat as Hydrofluoric Acid Burn. Burns around fingernails or toenail are difficult to treat as the acid may penetrate the nails. Treatment may require removal of the nail.

For minor burns to the face and mucous membranes, an ointment containing 2.5% calcium gluconate may be used in lieu of HYAMINE or ZEPHIRAN solutions. The jelly may be massaged into the burn. A possible treatment is subcutaneous injection of sterile 2.5% calcium gluconate solution around and beneath the skin and in the burned areas. Initially use no more than 0.5cc per square centimeter of affected skin surface, and do not distort the appearance of the skin. If pain is not relieved, additional treatment may be indicated. Obtain additional information on treating hydrofluoric acid burns from a poison control center.

Special notes to treating physician:

Medical personnel treating any victim of hydrofluoric acid exposure should be aware of the following possible complications:

1. Shock
2. Inhalation of vapors can cause pulmonary edema for which effects may be delayed. In addition, vapors may burn oral tissue causing swelling which may restrict breathing.
3. Exposure to significant amounts of hydrofluoric acid by any route may also result in hypocalcemia. Hypocalcemia should be considered a risk in all instances of inhalation and ingestion, and whenever burns exceed 25 square inches (160 square centimeters of body surface).

SECTION 5. FIREFIGHTING MEASURES

Not considered to be a fire hazard. Can react with certain metals, such as aluminum, to generate flammable hydrogen gas.

Explosion: May cause fire and explosions when in contact with incompatible materials.

Fire Extinguishing Media: Use any means suitable for extinguishing surrounding fire. Adding water to caustic solution generates large amounts of heat.

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.

SECTION 6. SPILL/ACCIDENTAL RELEASE MEASURES

Note: No cleanup should be attempted until cleanup personnel are equipped with personnel protective gear to prevent contact with product. (Applies to undiluted product.) Remove contaminated clothing immediately. Ventilate area of leak or spill. Keep unnecessary and unprotected people away from area of spill. Wear appropriate personal protective equipment as specified in Section 8.

Spills: Neutralize with sodium bicarbonate, soda ash, or lime. Pick up neutralized solution with a plastic pump or vacuum truck and store the neutralized solution in a leak-proof polyethylene container until product can be disposed of in a hazardous waste facility. Flush area twice with water to remove any remaining residues. Store wash solution in polyethylene containers for disposal. Do not use aluminum tools to collect absorbed material or aluminum containers to store collected wastes. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

SECTION 7. HANDLING AND STORAGE

Keep containers closed when not in use. Practice good housekeeping. Wash hands after handling. Avoid smoking when using this product. Isolate contaminated clothing and shoes. Wash contaminated before re-use! Discard contaminated leather shoes-do not attempt to salvage! Read the disposal information before disposing of leaking or empty containers. Avoid breathing mists or spray. Avoid contact with eyes. Use only with adequate ventilation. Do not use metal measuring containers for handling this product. Make sure all safety equipment is available and protective clothing is in use before handling this product. Do not store in aluminum or magnesium containers. Do not mix with acids or other incompatible materials. Keep this and all chemicals out of the reach of children. Wash hands and all exposed skin thoroughly after handling.

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SECTION 8. EXPOSURE CONTROLS /PERSONAL PROTECTION

Airborne Exposure Limits:

Substance	CAS No.	OSHA Permissible Exposure Limit (PEL):
Sulfuric acid	7664-93-9	1 mg/m ³
Hydrofluoric acid	7664-39-3	3 mg(F)/m ³
Hydrogen fluoride	7664-39-3	15 mg/m ³ Ceiling

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.

Personal Respirators (NIOSH Approved):

If the exposure limit is exceeded and engineering controls are not feasible, a full-face piece particulate respirator with an acid/gas cartridge(s) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. If oil particles (e.g. lubricants, cutting fluids, glycerin, etc.) are present, use a NIOSH type R or P filter with acid-gas cartridge filter. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection: Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities or a source of running water in the work area.

Work Hygienic Practices: Use proper industrial hygiene practices to minimize hazardous exposure. Wash hands after handling this material, and before eating or smoking.

SECTION 9. PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling point: >220°F	Specific gravity (H₂O = 1): 1.08-1.09
Vapor pressure (mm Hg): Same as water	Melting point (Pour Point): <25°F
Vapor density (Air = 1): Same as water	Evaporation rate (Water = 1): >1
Solubility in water: Water miscible	pH@100%: 1-2
Appearance and odor: Pungent red liquid	

SECTION 10. STABILITY AND REACTIVITY DATA

Stability: Stable under ordinary conditions of use and storage.

Compatibility: (Materials to avoid): Do not mix this product with alkalis, oxidizers, reducing agent or any other material. Do not allow contact with glass.

Hazardous Decomposition or Byproducts: Hydrogen gas, Hydrogen fluoride, fluorine, fluorides, hydrogen sulfide, sulfur dioxide, phosgene gas.

Hazardous Polymerization: Will not occur.

Incompatibilities: Do not mix this product with alkalis or any other material. Do not allow contact with glass.

Conditions to Avoid: Heat, incompatible materials.

SECTION 11. TOXICOLOGY INFORMATION

RTECS#: CAS# 7664-39-3: MW7875000

LD50/LC50: CAS# 7664-39-3: Inhalation, mouse: LC50 = 342 ppm/1H; Inhalation, rat: LC50 = 1276 ppm/1H.

Carcinogenicity:

Hydrofluoric acid -

ACGIH: A4 - Not Classifiable as a Human Carcinogen (as F) (listed)

IARC: Group 3 carcinogen (listed as ** undefined **).

Epidemiology: No information available.

Teratogenicity: No information available.

Reproductive Effects: TLo - Lowest published toxic concentration: Inhalation, Rodent - rat: 470 g/m³/4H : female 1-22 day(s) after conception.

Neurotoxicity: No information available.

Mutagenicity: Cytogenetic analysis: Inhalation, Rodent - rat: 1 mg/m³/6H/24D (Intermittent).

Other Studies: See actual entry in RTECS for complete information.

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SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity: Fish (fresh water) (for HF) 60 ppm lethal (time period not specified).

Biodegradation Data

Ingredient	%	CAS/EINECs#	Biodegradation	Exposure Time	Method
Polyethylene glycol octylphenyl ether	0.5	9036-19-5	> 60 %	28 d	OECD 301B
Amine Oxide	0.5	275-530-0	71%	28 d	OECD 302B

SECTION 13. DISPOSAL CONSIDERATIONS

Treat empty containers as hazardous. Dispose of spill-clean up and other wastes in accordance with Federal, State, and local regulations. Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Although not a listed RCRA hazardous waste, this material may exhibit one or more characteristics of a hazardous waste and require appropriate analysis to determine specific disposal requirements. 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. TRANSPORTATION INFORMATION

US DOT: UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (contains hydrofluoric acid and sulfuric acid), 8, PGII
International (Water, I.M.O.)

Proper Shipping Name: UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (contains hydrofluoric acid and sulfuric acid)

Hazard Class: 8

UN/NA: UN3264

Packing Group: II

SECTION 15. REGULATORY INFORMATION

EC Classification: 009-002-00-6 (Hydrofluoric acid)



Risk phrases:

R35: Causes severe burns.

R36/38: Irritating to eyes and skin

Safety phrases:

S2: Keep out of reach of children

S24/25: Avoid contact with skin and eyes

S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S37/39: Wear suitable, gloves and eye/face protection.

S 45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

US EPA

Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA) requires notification of the National Response Center of release quantities of Hazardous Substances is not required for this material.

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on threshold planning quantities and release reporting based on reportable quantities in 40 CFR 355 (used for SARA 302, 304, 311, and 312) is not required for quantities below 250 pounds.

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372 (for SARA 313). This material is not subject to reporting requirements.

Toxic Substances Control Act (TSCA) Status: The ingredients of this product are on the TSCA inventory.

State Right to Know

California Proposition 65:

Massachusetts: Hazardous substances and extraordinarily hazardous substances must be identified.

Pennsylvania: Hazardous substances must be identified.

California SCAQMD Rule 443.1 (VOC's)

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Chemical Inventory Status

Ingredient	TSCA	EC	Japan	Australia	Korea	DSL	NDSL	Phil.
Hydrogen Fluoride (CAS# 7664-39-3)	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Sulfuric acid (CAS# 7664-93-9)	Yes	Yes	Yes	Yes	Yes	Yes	---	Yes
Polyethylene glycol - octylphenyl ether (CAS# 9036-19-5)	Yes	No				Yes		
Tomah Amine Oxide AO-728 (CAS# 71486-82-3)	Yes	Yes				Yes		

Federal, State & International Regulations

	SARA 302	SARA 313	TSCA	RCRA
	RO	TPQ		
Mixture	No	No	No	No

SARA 311/312: Acute: **Yes** Chronic: **Yes** Fire: **No** Pressure: **No** Reactivity: **Yes (Mixture / Liquid)**

WHMIS: This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

SECTION 16. OTHER INFORMATION

Risk Phrases

R26/27/28: Very toxic by inhalation, in contact with skin and if swallowed

R35: Causes severe burns

R36/38: Irritating to eyes and skin

NFPA Ratings: Health: **3** Flammability: **0** Reactivity: **1**

Label Hazard Warning:

CORROSIVE, POISON! Contains Hydrofluoric acid, phosphoric acid and sulfuric acid. May be fatal if swallowed. Harmful if inhaled. Causes burns to skin and eyes.

Label Precautions:

Do not use this product without skin and eye protection.

Do not use this product until you have read all warning statements on bottle and consulted the Safety Data Sheet

Do not use this product unless a source of running water is available.

Keep container closed.

Wash thoroughly after use.

Label First Aid:

If swallowed, **DO NOT INDUCE VOMITING.** Immediately drink 3-4 glasses of water followed by a large glass of citrus juice. Call a physician immediately.

Eyes: flush eyes with running water for at least 15 minutes while lifting lids to rinse the area behind the eyelids. Skin: flush affected area with running water for at least 15 minutes or until skin no longer feels slick while removing contaminated clothing and shoes. Wash clothing before reuse. If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing does not return to normal within a few minutes, get medical attention.

Product Use: Air condition and refrigeration coil cleaner

SECTION 17. MANUFACTURER:

Specialty Chemical Manufacturing

A DiversiTech Company

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Quincy, FL 32351

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EMERGENCY Phone No.: +1.800.255.3924 or +1.813.248.0573 Chem-Tel (Chemical Emergencies Only)

SECTION 18. REFERENCE NUMBER AND DATE OF ISSUE

MSDS Safety Data Sheet: DT301

Issued 12/11/2009

This information is, to the best of our knowledge and belief, accurate and reliable as of the date completed. However no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the completeness and suitability of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information, nor do we offer any warranty against patent infringement.