

MATERIAL SAFETY DATA SHEET

MSDS 0255

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

		HMIS CODES	
PRODUCT NAME	Con-Coil	Health	4
		Flammability	0
		Reactivity	0
PRODUCT CODES	82622, 82624, 82628	PPI	X
CHEMICAL FAMILY	Inorganic Acids		
USE	Condenser Coil Cleaner		
MANUFACTURER'S NAME	The RectorSeal Corporation	EMERGENCY TELEPHONE NO.	
	2601 Spenwick Drive	Chemtrec 24 Hours	
	Houston, Texas 77055 USA	(800)424-9300 USA	
		001-527-3887 International	
DATE OF VALIDATION	August 29, 2011	TECHNICAL SERVICE TELEPHONE NO.	
		(800)231-3345 or (713)263-8001	
DATE OF PREPARATION	August 29, 2011		

Section 2 -- HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards

Target Organ Effect, Toxic by inhalation., Highly toxic by ingestion, Highly toxic by skin absorption, Corrosive

Target Organs

Liver, Kidney

GHS Classification

Acute toxicity, Oral (Category 2)

Acute toxicity, Inhalation (Category 2)

Acute toxicity, Dermal (Category 1)

Skin corrosion (Category 1A)

Serious eye damage (Category 1)

GHS Label elements, including precautionary statements

Pictogram: Corrosive, Toxic

Signal word: Danger

Hazard statement(s)

H300 + H310 Fatal if swallowed or in contact with skin.

H314 Causes severe skin burns and eye damage.

H330 Fatal if inhaled.

Precautionary statement(s)

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

P264 Wash hands thoroughly after handling.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P284 Wear respiratory protection.

P302 + P350 IF ON SKIN: Gently wash with plenty of soap and water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/ physician.

Classification according to EU Directives 67/548/EEC or 1999/45/EC
For the full text of the R phrases mentioned in this Section, see Section 16
Symbol(s) Xi - Irritant
F - Highly flammable
R -phrase(s)
R11 - Highly flammable
R36 - Irritating to eyes
R66 - Repeated exposure may cause skin dryness or cracking
R67 - Vapors may cause drowsiness and dizziness
R-code(s) F;R11 - Xi;R36 - R66 - R67

SUMMARY OF ACUTE HAZARDS

Hydrofluoric acid is extremely irritating and corrosive to skin and mucous membranes. Speed in moving exposed personnel from contaminated area and in removing HF from skin or eyes is of primary importance. First aid must be started immediately, within seconds, in all cases of contact with hydrofluoric acid in any form. Inhalation of the vapor may cause ulcers of the upper respiratory tract. Concentrations at 50 to 200 ppm are dangerous. Hydrofluoric acid produces burns, which are slow in healing. The subcutaneous tissue may be affected, becoming blanched and bloodless. Gangrene of the affected areas may follow.

SYMPTOMS OF OVEREXPOSURE BY EYE OR SKIN CONTACT, INHALATION, OR INGESTION:

Conjunctivitis, corneal burns; severe skin burns with ulceration; pain behind the breastbone, cough, spitting blood, dyspnea, difficult breathing, bronchopneumonia, cyanosis, shock, muscle spasms, convulsions, jaundice, oliguria, albuminuria, hematuria, nausea, vomiting, abdominal pain, diarrhea; burns and corrosion of mouth, esophagus, stomach and small bowel. Inhalation over exposure may cause lung damage and pulmonary edema. Toxicity from pulmonary absorption of fluoride ion may develop in the liver and kidneys.

SUMMARY OF CHRONIC HAZARDS

Possible mutagen. Respiratory ulcers may occur. Skin injuries may result in gangrene.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Individuals with pre-existing or chronic diseases of the eyes, skin, respiratory system, cardiovascular system, gastrointestinal system, liver, or kidneys may have increased susceptibility to excessive exposure.

Section 3 -- COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT: Phosphoric Acid
PERCENTAGE BY WEIGHT: 12.29
CAS NUMBER: 7664-38-2
EC# : 2316332

INGREDIENT: Hydrofluoric Acid
PERCENTAGE BY WEIGHT: 9.69
CAS NUMBER: 7664-39-3
EC# : 231-634-8

INGREDIENT: Glycol Butyl Ether

PERCENTAGE BY WEIGHT: 1.40
CAS NUMBER: 111-76-2
EC# : 203-905-0

Section 4 -- FIRST AID MEASURES

If INHALED: Exposed individuals should be carried at once into an uncontaminated atmosphere. Even in the absence of symptoms, a physician should be called immediately. If breathing has stopped, begin artificial respiration. If inhalation equipment and trained attendant are available, oxygen administration should be started at once. Patient should remain quiet - preferably lying down and kept warm and comfortable. As soon as possible, patient should be given 2.5% to 3% calcium gluconate solution by inhalation, preferably by intermittent positive pressure breathing (IPPB) using a nebulizer, or by nebulizer alone. The patient should be watched carefully for edema of the upper airway with respiratory obstruction. Delayed pulmonary edema is likely in patients with burns of the skin on the face or neck. If pulmonary edema develops, the patient should be placed in IPPB with positive end - expiratory pressure (PEEP). The administration of respiratory care should be closely supervised and performed by qualified personnel. Stimulants should not be given unless ordered by a physician. Under no circumstances should a patient be permitted

If on SKIN: Workers who have had contact with hydrofluoric acid should be subjected immediately to a drenching shower of water. The clothing should be removed as rapidly as possible, even while the victim is in the shower, and medical assistance obtained immediately. It is essential that the exposed area be washed with copious amounts of water for a sufficient period of time to remove all hydrofluoric acid from the skin (5 Minutes). Calcium gluconate gel (2.5%) should be rubbed in continuously until pain has completely subsided. Personnel who apply the gel should be sure to wear rubber gloves to prevent skin contamination with the HF. Calcium gluconate gel is the preferred treatment but an alternative treatment is using an iced aqueous or alcoholic solution, 0.13% (1:750) of benzalkonium chloride (zephiran chloride); and iced 70% alcohol solution; or and ice-cold saturated solution of magnesium sulfate (epsom salt) should be applied for at least 30 minutes. If the burn is in such an area that it is impractical to immerse the part, then the iced solution should be applied with saturated compresses, which should be changed at least every two minutes. The physician should be available by then to administer further treatment before completion of the iced solution treatment. However, if a physician is not available by that time, the treatment with one of the iced solutions should be continued for two to four hours. In cases of overexposure due to HF, as in skin burns of greater than approximately 25 sq. inches in area, hypocalcemia may be present. Therefore, systemic administration of calcium gluconate may be necessary. Frequent monitoring of serum calcium, renal and hepatic functions are necessary.

If in EYES: If even minute quantities of hydrofluoric acid enter the eyes, they should be immediately irrigated with running water for 5 minutes. The eyelids should be held apart during the irrigation to insure contact of water with all accessible tissue of the eyes and lids. Immediately following

irrigation with water, a 1% calcium gluconate solution should be used to wash the eyes thoroughly for 5-10 minutes, and then instilled every 2-3 hours as drops. A physician, preferably an eye specialist, should be called in at once. No oils or oily ointment should be used unless ordered by the physician.

If SWALLOWED: Swallowing of hydrofluoric acid causes burns of the mucous membrane of the mouth, throat, esophagus and the stomach. The patient should be encouraged to immediately drink a large amount of water or milk with added milk of magnesia. Do not induce vomiting. Call a physician immediately.

Section 5 -- FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Use agents appropriate for surrounding fires.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus (SCBA) and other protective clothing. Hazardous decomposition products possible (see Section 10). Evacuate immediate area.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Material can generate explosive hydrogen gas on contact with certain metals and reacts violently with water. Runoff from fire control may cause pollution. Neutralize runoff with sodium bicarbonate.

Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Evacuate area and keep upwind until gas has dispersed. Dike spill. Dilute with water fog (direct application of alkali may cause violent splattering). Neutralize with sodium bicarbonate. Persons not wearing protective equipment and clothing should be restricted from areas of spills or leaks until clean up has been completed.

Section 7 -- HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep container closed and upright when not in use. Do not store near heat, sparks, or open flames. This product will attack glass, concrete and certain metals. Store only in plastic containers. DO NOT USE METAL CANS.

OTHER PRECAUTIONS: Refrain from splashing product when pouring. Avoid all contact with skin or clothing. Empty containers may contain residues and vapors. KEEP OUT OF REACH OF CHILDREN.

Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

INGREDIENT	UNITS
Phosphoric Acid	
ACGIH TLV	1 mg/m3
OSHA PEL	1 mg/m3
Hydrofluoric Acid	
ACGIH TLV	3 ppm
OSHA PEL	3 ppm
OSHA STEL	6 ppm
Glycol Butyl Ether	
ACGIH TLV	25 ppm
OSHA PEL	25 ppm

RESPIRATORY PROTECTION (SPECIFY TYPE): In confined poorly ventilated areas, use NIOSH/MSHA approved air purifying or supplied air purifying or supplied air respirators.

VENTILATION - LOCAL EXHAUST: Acceptable

SPECIAL: N/A

MECHANICAL (GENERAL): Acceptable

OTHER: N/A

PROTECTIVE GLOVES: Wear acid resistant gloves (neoprene, PVC, butyl rubber).

EYE PROTECTION: Full-face shield and chemical splash goggles (ANSI Z-87.1 or equivalent).

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Acid resistant vinyl or polyethylene coated coveralls.

WORK/HYGIENIC PRACTICES: Where use can result in skin contact, wash exposed areas thoroughly before eating, drinking, smoking, or leaving work area. Launder contaminated clothing before reuse.

Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT:	>212 @ 760mm Hg
SPECIFIC GRAVITY (H2O = 1):	1.09
VAPOR PRESSURE (mm Hg):	17 @ 68 F (20 C)
MELTING POINT:	N/A
VAPOR DENSITY (AIR = 1):	N/A
EVAPORATION RATE (ETHYL ACETATE = 1):	<1
APPEARANCE/ODOR:	Clear pink liquid / irritating odor
SOLUBILITY IN WATER:	Soluble
VOC LEVEL: <10 g/L per SCAQMD Test Method 316A	
FLASH POINT	None
LOWER EXPLOSION LIMIT	N/D
UPPER EXPLOSION LIMIT	N/D

Section 10 -- STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID: Uncontrolled contact with water and active metals. Excessive heat will cause pressure build-up in container.

INCOMPATIBILITY (MATERIALS TO AVOID): Alkalies, most metals, cyanides, sulfides, glass and ceramics.

HAZARDOUS DECOMPOSITION PRODUCTS: Fluorides and hydrogen gas on contact with certain metals; these fumes can be highly corrosive.

HAZARDOUS POLYMERIZATION: Will not occur, however, non-hazardous endothermic polymerization may occur in both the liquid and gaseous phases.

Section 11 -- TOXICOLOGY INFORMATION

CHRONIC HEALTH HAZARDS

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

TOXICOLOGY DATA

Ingredient Name

Phosphoric Acid

Oral-Rat LD50:1530 mg/kg
Inhalation-Rat LC50:N/D

Hydrofluoric Acid

Oral-Rat LD50:5045 mg/kg
Rat LC50:966 PPM/1H

Glycol Butyl Ether

Oral-Rat LD50:470 mg/kg

Inhalation-Rat LC50:2900 mg/m3

Section 12 -- Ecological Information

ECOLOGICAL DATA

Ingredient Name

Phosphoric Acid

Food Chain Concentration Potential

None

WATERFOWL TOXICITY

N/A

BOD

None

AQUATIC TOXICITY

138 ppm/24 hr/mosquito

fish/TLm

Hydrofluoric Acid

Food Chain Concentration Potential

None

WATERFOWL TOXICITY

N/A

BOD

None

AQUATIC TOXICITY

60 ppm/fish/lethal

Glycol Butyl Ether

Food Chain Concentration Potential

N/A

WATERFOWL TOXICITY

N/A

BOD

26%

AQUATIC TOXICITY

1000 ppm/24 hr/brine shrimp/TLm

Section 13 -- DISPOSAL CONSIDERATIONS

Waste Classification: Corrosive (D002)

Disposal Method: Neutralization

RCRA classified hazardous waste. Dispose of absorbed materials and liquid waste in accordance with all local, state and federal regulations.

Section 14 -- TRANSPORTATION INFORMATION

DOT: UN3264, Corrosive Liquid, Acidic, Inorganic, N.O.S. (Hydrofluoric and Phosphoric Acid), Class 8, PG II, ERG#154

OCEAN (IMDG): UN3264, Corrosive. Liquid, Acidic, Inorganic, N.O.S. (Hydrofluoric

and Phosphoric Acid), Class 8, PG II, EMS-No: F-A, S-B

AIR (IATA): UN3264, Corrosive Liquid, Acidic, Inorganic, N.O.S.

(Hydrofluoric and

Phosphoric Acid), Class 8, PG II, ERG#154

WHMIS (CANADA): Class E

Section 15 -- REGULATORY INFORMATION

REGULATORY DATA

Ingredient Name

Phosphoric Acid

SARA 313

Yes

TSCA Inventory

Yes

CERCLA RQ

5,000 lb.

RCRA Code

N/A

Hydrofluoric Acid

SARA 313

Yes

	TSCA Inventory	Yes
	CERCLA RQ	100 lb.
	RCRA Code	U134
Glycol Butyl Ether		
	SARA 313	Yes
	TSCA Inventory	Yes
	CERCLA RQ	N/A
	RCRA Code	N/A

Section 16 -- OTHER INFORMATION

This document is prepared pursuant to 91/155/EEC ISO 11014-1. The information herein is given in good faith, but no warranty, expressed or implied is made. Consult RectorSeal for further information: (713) 263-8001