



A CSW Industrials Company

## SAFETY DATA SHEET

### CON-COIL™

Aluminum brightener and cleaner

## SECTION 1 - PRODUCT AND COMPANY INFORMATION

**Product name**

Con-Coil

**Product Codes**

82651

**Chemical Family**

Inorganic Acids

**Use**

Condenser Coil Cleaner

**Manufacturer's Name**

RectorSeal LLC  
2601 Spenwick Drive  
Houston, Texas 77055 USA

**Date of validation**

March 3, 2020

**Date of Preparation**

March 3, 2020

**HMIS Codes**

Health 3  
Flammability 0  
Reactivity 0  
PPI X

**Emergency Telephone No.**

Chemtrec 24 Hours  
(800) 424-9300 USA  
(703) 527-3887 International

**Technical Service Telephone No.**

(800) 231-3345 or (713) 263-8001

## SECTION 2 - HAZARDS IDENTIFICATION

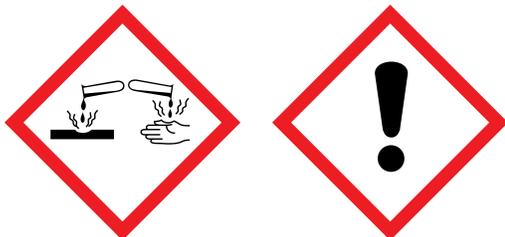
### Emergency Overview

**OSHA Hazards**

Acute toxicity, Oral Category 4  
Acute toxicity, Inhalation Category 2  
Skin corrosion, Category 1A  
Serious eye damage, Category 1

**Physical Hazards**

Corrosive, Category 1

**GHS Label elements, including precautionary statements**

GHS05: Corrosive  
 GHS07: Exclamation Mark  
 Signal Word: Danger

**Hazard Statements:**

H290 - May be corrosive to metals.  
 H302 - Harmful if swallowed  
 H314 - Causes severe skin burns and eye damage.

**Precautionary Statements:**

P234 - Keep only in original container.  
 P260 - Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
 P262 - Do not get in eyes, on skin, or on clothing.  
 P264 - Wash hands thoroughly after handling.  
 P270 - Do not eat, drink or smoke when using this product.  
 P271 - Use only outdoors or in a well-ventilated area.  
 P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection.  
 P285 - In case of inadequate ventilation wear respiratory protection.

**RESPONSE**

P301 + P310 + P330 - IF SWALLOWED: Immediately call a POISON CENTER/doctor. Rinse mouth.  
 P303 + P361 + P353 + P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower, then apply iced 0.13% benzalkonium chloride soaks or 2.5% calcium gluconate gel to affected areas. Immediately call a poison center, doctor, emergency room, or 911. Wash contaminated clothing before reuse.  
 P304 + P340 + P310 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center, doctor, emergency room, or 911. Administer oxygen then consider 2.5% calcium gluconate by nebulizer.  
 P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes.  
 Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.  
 P320 - Specific treatment (see supplemental first aid instructions on this label).  
 P363 - Wash contaminated clothing before reuse.  
 P390 - Absorb spillage to prevent material damage.

**STORAGE**

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
 P405 - Store locked up.  
 P406 - Store in corrosive resistant/ container with a resistant inner liner.

**DISPOSAL**

P501 - Dispose of contents/ container to an approved waste disposal plant.

## SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

**Ingredient:** Water

Percentage by weight: 60-80

CAS Number: 7732-18-5

EC#: 231-791-2

**Ingredient:** Phosphoric Acid

Percentage by weight: 10-20

CAS Number: 7664-38-2

EC#: 231-633-2

**Ingredient:** Ammonium bifluoride

Percentage by weight: 5-10

CAS Number: 1341-49-7

EC#: 215-676-4

**Ingredient:** Alcohols, C9-11 saturated, ethoxylate

Percentage by weight: 1-5

CAS Number: 68439-46-3

EC#: 931-514-1

## SECTION 4 - FIRST AID MEASURES

**GENERAL DESCRIPTION OF SYMPTOMS & FIRST-AID MEASURES**

Product causes burns by all exposure routes. Most likely work-place exposure routes will be skin contact or inhalation. This product contains ammonium bifluoride (NH<sub>4</sub>HF<sub>2</sub>). Ammonium bifluoride is a corrosive chemical and contact can severely irritate and burn the skin and eyes causing possible permanent eye damage. Breathing ammonium bifluoride can severely irritate and burn the nose, throat, and lungs, causing nosebleeds, cough, wheezing and shortness. Inhalation or ingestion of large amounts of ammonium bifluoride can cause nausea, vomiting and loss of appetite. Very high or long term exposures can cause fluoride poisoning with stomach pain, weakness, convulsions and death. Long term or repeated exposures can cause deposits of fluorides in bones and teeth, a condition called fluorosis. This may cause pain, disability and discoloration of teeth. During most exposures, ammonium bifluoride will dissociate to release hydrofluoric acid. First aid techniques for treatment to hydrofluoric acid exposures are unique and require a rapid response and the use of calcium (most commonly calcium gluconate solutions or gels) to scavenge and neutralize the fluoride. (See Special Treatment/Other). The effect of HF, i.e., onset of pain, particularly in dilute solutions, may not be felt for up to 24 hours. It is important, therefore that persons using ammonium bifluoride have immediate access to an effective antidote even when they are away from their work place in order that first aid treatment can be commenced immediately.

If INHALED	Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center, doctor, emergency room, or 911. Administer oxygen then consider 2.5% calcium gluconate by nebulizer.
If on SKIN (or HAIR)	Take off immediately all contaminated clothing. Rinse skin with water/shower, then apply iced 0.13% benzalkonium chloride soaks or 2.5% calcium gluconate gel to affected areas. Immediately call a poison center, doctor, emergency room, or 911. Wash contaminated clothing before reuse.
If in EYES	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center, doctor, emergency room or 911.
Special Treatment/Other	If ingested, possible perforation of stomach or esophagus should be investigated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation. For skin exposure, the most effective immediate treatment is to flush the affected area with water. Although this will ameliorate the effects of phosphoric acid, the effects of ammonium bifluoride and any released hydrofluoric acid may be slower to appear and may take up to 24 hours to appear. Treatment should continue by use of an HF Antidote Gel. HF Antidote Gel should be massaged into the wound until there is cessation of pain. HF Antidote Gel contains calcium gluconate which combines with HF to form insoluble calcium fluoride, thus preventing the extraction of calcium from the body tissue and bones. Since the effects of the diluted ammonium bifluoride (<5%) may not be apparent for some hours, it is recommended that any person in contact with ammonium bifluoride should carry, or have access to a tube of HF Antidote Gel at all times: ideally with one tube at the work place, one on the person and one at home.

**FOR MEDICAL PROFESSIONALS:**

**For skin exposure:** debride (if necessary), then continue iced 0.13% benzalkonium chloride soaks OR 2.5% calcium gluconate gel OR 2.5-5% calcium gluconate injection. The injections must be used if the soaks or gel do not significantly relieve pain in 30-40 minutes. Injections may also be used as the primary treatment, especially for larger and/or deeper burns. **For eye exposure:** Topical tetracaine hydrochloride THEN 1% calcium gluconate irrigation followed by an ophthalmologist consult. **For inhalation:** Inhalation of particles (mists, aerosols) may occur. Continue calcium gluconate by nebulizer and observe. **For ingestion:** Lavage with calcium chloride or calcium gluconate and treat systemic effects.

## SECTION 5 - FIRE FIGHTING MEASURES

**Flammable properties**

Classification:	non-flammable
Flash point:	none-to-boil
Autoignition temperature:	not determined
Lower flammable limit:	not applicable
Upper flammable limit:	not applicable

**Specific hazards**

Product is water based and presents no unusual fire hazards.

**Extinguishing media**

Use extinguishing agents appropriate for controlling surrounding fire.

Unsuitable: none.

**Protection & precautions for firefighters**

**Protective Equipment & Clothing:** Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters protective clothing will only provide limited protection. Fire Fighting Guidance: Cool containers with flooding quantities of water until well after fire is out. Move containers from fire area if you can do it safely. Dike fire control water for later disposal; do not scatter material. Avoid use of diking materials containing silicon. Containers can expand and explode under fire conditions due to vapor buildup. If container ruptures, contents could react with metals releasing hydrogen gas which could form an explosive atmosphere. Always stay away from containers engulfed in fire. **Hazardous Combustion Products:** Smoke, fumes, and oxides of fluorine, phosphorus, and nitrogen when taken to dryness and burned. Hydrogen fluoride and ammonia may be released.

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

**LAND SPILL:**

Absorb spillage to prevent material damage. Stop leak if you can do it safely. For large spills, dike and pump into properly labeled containers for reclamation or disposal. For small spill, soak up with absorbent material and place in properly labeled containers for disposal. Neutralize residue with dilute base and follow with a liberal covering of calcium carbonate.

**WATER SPILL:**

This is a water based product and will completely mix/dissolve in water making recovery difficult. This product is acidic and may lower the pH of surface waters with low buffering capacity. Check with local environmental regulatory agencies for reporting requirements.

## SECTION 7 - HANDLING AND STORAGE

**HANDLING:**

Avoid contact with eyes, skin and clothing. After handling, always wash hands thoroughly with soap and water. Avoid personal contact with any residue. Do not cut, weld, or reuse empty container.

**STORAGE:**

Store in corrosive resistant steel container with a resistant liner or in polyethylene container. Store locked up. Store in a well-ventilated place. Keep container tightly closed. Do not store near strong bases or highly alkaline materials. Do not store in direct sunlight. Avoid storing above 1200F (49C). Absorb spillage to prevent material damage.

## SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredient	Units
<b>Phosphoric Acid</b>	
ACGIH	1 mg/m <sup>3</sup> TWA 3 ppm STEL
NIOSH	1 mg/m <sup>3</sup> TWA 3 ppm STEL
OSHA Z1	1 mg/m <sup>3</sup> TWA

**Ammonium bifluoride**

ACGIH	2.5 mg/m <sup>3</sup> as F TWA A4, BEI
NIOSH	2.5 mg/m <sup>3</sup> as F TWA
OSHA-Z1	2.5 mg/m <sup>3</sup> as F TWA
OSHA-Z1	2.5 mg/m <sup>3</sup> as F dust TWA

**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

Appearance:	clear water white liquid
Odor:	Sharp odor
Odor Threshold:	not determined
pH:	less than 1.0
Melting Point / Freezing:	about 23F
Boiling Point / Boiling Point Range:	about 212F
Flash Point:	not applicable
Evaporation Rate:	equal to water
Flammability:	not applicable
Lower Flammable Limit:	not applicable
Upper Flammable Limit:	not applicable
Explosive Properties:	not applicable
Vapor Pressure:	equal to water
Relative Vapor Density:	equal to water
Relative Density:	1.12
Solubility (Water):	soluble in water
Partition Coefficient (Kow):	not applicable
Auto-ignition temperature:	not applicable
Decomposition temperature:	not applicable
Viscosity:	less than 10 centipoise at 20C

## SECTION 10 - STABILITY AND REACTIVITY

**Reactivity:**

Product will react with strong bases and highly alkaline materials, giving off heat and possible splattering. Product can react with metals giving off potentially explosive hydrogen gas. Product can react with sulfides and cyanides to release poisonous hydrogen cyanide and hydrogen sulfide gas.

**Chemical Stability:**

Stable.

**Hazardous Reactions:**

Mixing with bases and highly alkaline materials will give off heat and may cause splattering. Hazardous polymerization will not occur.

**Conditions to Avoid:**

Do not store near strong bases and highly alkaline materials

**Incompatible Materials:**

Strong bases, highly alkaline materials, metals, and cyanides. Glass and silicate-containing materials may be attacked.

**Hazardous Decomposition Products:**

Thermal decomposition generates corrosive vapors which may contain hydrofluoric acid and ammonia.

## SECTION 11 - TOXICOLOGY INFORMATION

This product contains phosphoric acid and ammonium bifluoride. Contact with skin and/or eyes, ingestion, or inhalation of spray mist may be corrosive. Possible effects may include severe irritation, burns, and permanent damage to exposed tissues if immediate action is not taken. Note: Phosphoric acid will attack tissue and effects may be felt rather quickly. Although effects of a phosphoric acid burn may be ameliorated through initial treatment, the effects of ammonium bifluoride and associated hydrofluoric acid burns may be slower to appear and may take up to 24 hours to appear. Ongoing treatment is essential to avoid significant tissue damage (See Section 4 - First-Aid Measures).

**ACUTE TOXICITY:**

**Dermal:** no data available

**Inhalation:** no data available

**Oral:** LD50 = 1,700 mg/kg (estimated from additivity formula)

**Skin Corrosion/Irritation:** Will cause severe irritation or burns if not quickly washed off.

**Serious Eye Damage/Irritation:** Will cause serious eye damage which can result in severe irritation, pain and burns, and permanent damage including blindness if immediate action not taken.

**Sensitization:** Respiratory or Skin. Product not expected to be a respiratory or skin sensitizer based on individual component data.

**Germ Cell Mutagenicity:** Product not expected to be a respiratory or skin sensitizer based on individual component data. Ammonium bifluoride has shown mixed results in various in vitro and in vivo tests, including a negative in vitro test using bacteria with and without metabolic activation, a positive in vitro test using mammalian cells with and without activation, an ambiguous result in a chromosome aberration test with and without metabolic activation, and a negative in vivo test (method not identified).

**Carcinogenicity:** The ingredients in this product are not listed by NTP or OSHA as a carcinogen. ACGIH lists fluorides as A4 - not classifiable as a human carcinogen.

**Reproductive / Developmental Toxicity:** Product not expected to be a reproductive or developmental toxicant based on individual component data.

**Specific Target Organ Effects:** Single Exposure. No effects other than those associated with the product being corrosive.

**Specific Target Organ Effects:** Repeated or Prolonged Exposure. Chronic exposure to fluoride may cause mottling of teeth, bone damage, and fluorosis. Symptoms of fluorosis include brittle bones, weight loss, anemia, calcified ligaments, general ill health and joint stiffness.

**Aspiration Hazard:** Not considered an aspiration hazard based upon component data.

## SECTION 12 - ECOLOGICAL INFORMATION

This material is acidic and may lower the pH of surface waters with low buffering capacity. Although calculated toxicity is above 100 mg/l, product should be considered toxic to aquatic organisms due to pH effect. (Acute aquatic toxicity category 2 by European Union classification).

**Fish:** LC50 >100 MG/L (ESTIMATED USING ADDITIVITY FORMULA)

**Aquatic invertebrates:** EC50 >100 MG/L (ESTIMATED USING ADDITIVITY FORMULA)

**Persistence and Degradability:** NOT APPLICABLE.

**Bioaccumulative Potential:** NOT APPLICABLE.

**Other Adverse Effects:** NONE KNOWN.

## 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. (Ammonium bifluoride and Phosphoric Acid), Class 8, PG III, ERG#154

OCEAN (IMDG): UN3264, Corrosive. Liquid, Acidic, Inorganic, N.O.S. (Ammonium bifluoride and Phosphoric Acid), Class 8, PG III, EMS-No: F-A, S-B

AIR (IATA): UN3264, Corrosive Liquid, Acidic, Inorganic, N.O.S. (Ammonium bifluoride and Phosphoric Acid), Class 8, PG III, ERG#154

## SECTION 15 - REGULATORY INFORMATION

**Regulatory Data**

<b>Ingredient:</b>	Phosphoric Acid
SARA 313	Yes
TSCA Inventory	Yes
CERCLA RQ	5,000 lb.
RCRA Code	N/A
<b>Ingredient:</b>	Ammonium bifluoride
SARA 313	Yes
TSCA Inventory	Yes
CERCLA RQ	100 lb.
RCRA Code	U134

## SECTION 16 - OTHER INFORMATION

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). The information herein is given in good faith, but no warranty, expressed or implied is made. Consult RectorSeal for further information: (713) 263-8001