

**Safety Data Sheet**  
**HD CONDENSER COIL CLEANER**

SDS Revision Date:

03/23/2015



Sid Harvey item # F1-31

SDS # Z0184

**1. Identification**

**1.1. Product identifier**

**Product Identity**

**HD CONDENSER COIL CLEANER**

**Alternate Names**

F1-31

**1.2. Relevant identified uses of the substance or mixture and uses advised against**

**Intended use**

See Technical Data Sheet.

**Application Method**

See Technical Data Sheet.

**1.3. Details of the supplier of the safety data sheet**

**Company Name**

ComStar International Inc.  
20-45 128th Street,  
College Point, NY 11356

**Telephone No.**

718-445-7900  
800-328-0142  
Fax: 718-353-5998

**2. Hazard(s) identification**

**2.1. Classification of the substance or mixture**

Skin Corr 1A;H314

Causes severe skin burns and eye damage.

Eye Dam. 1 ;H318

Causes serious eye damage.

**2.2. Label elements**

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.



**Warning**

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

**[Prevention]:**

P260 Do not breathe mist / vapors / spray.

P264 Wash thoroughly after handling.

P280 Wear protective gloves / eye protection / face protection.

**[Response]:**

P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

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P303+361 +353 IF ON SKIN (or hair): Remove I Take off immediately all contaminated clothing. Rinse skin with water / shower.

P304+340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+351 +338 IF IN EYES: Rinse continuously 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.

P363 Wash contaminated clothing before reuse.

### [Storage]:

P405 Store locked up.

### [Disposal]:

P501 Dispose of contents / container in accordance with local / national regulations.

## 3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
SODIUM GLUCONATE CAS#: 527-07-1	>10	Not Classified	[1]
SODIUM HYDROXIDE CAS #: 1310-72-2	<50	C; R35 Skin Corr. 1A; H314	[1][2]
SURFACTANT PACKAGE CAS#: N/A	>10	Not Classified	[1]
WATER CAS#: N/A	Balance	Not Classified	[1]

In accordance with paragraph (i) of §1910.1200, the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

[1] Substance classified with a health or environmental hazard.

[2] Substance with a workplace exposure limit.

[3] PBT-substance or vPvB-substance.

\*The full texts of the phrases are shown in Section 16.

## 4. First aid measures

### 4.1. Description of first aid measures

#### General

In all cases of doubt, or when symptoms persist, seek medical attention.  
Never give anything by mouth to an unconscious person.

#### Inhalation

Move victim to fresh air. Give artificial respiration ONLY if breathing has stopped. Give Cardiopulmonary Resuscitation (CPR) if there is no breathing AND no pulse. Obtain medical attention IMMEDIATELY.

#### Eyes

Immediately flush eyes with running water for a minimum of 20 minutes. Hold eyelids open during flushing. If irritation persists, repeat flushing. Obtain medical attention IMMEDIATELY. Do not transport victim until the recommended flushing period is completed unless flushing can be continued during transport.

#### Skin

Flush skin with running water for a minimum of 20 minutes. Start flushing while removing

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contaminated clothing. If irritation persists, repeat flushing. Obtain medical attention IMMEDIATELY. Do not transport victim unless the recommended flushing period is completed or flushing can be continued during transport.

While the patient is being transported to a medical facility, apply compresses of iced water. If medical treatment must be delayed, immerse the affected area in iced water. If immersion is not practical, compresses of iced water can be applied. Avoid freezing tissues.

## Ingestion

If victim is alert and not convulsing, rinse mouth and give 1/2 to 1 glass of water to dilute material. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus, rinse mouth and administer more water. IMMEDIATELY contact local poison control center. Vomiting may need to be induced but should be directed by a physician or a poison control center. IMMEDIATELY transport victim to an emergency facility.

## 4.2. Most important symptoms and effects, both acute and delayed

### Overview

**IMMEDIATE CONCERNS:** CAUTION: May cause eye or skin burns. Avoid vapor.

### POTENTIAL SIDE EFFECTS

**EYES:** Tissue destruction and permanent eye damage may occur if not treated immediately.

**SKIN:** May be corrosive and cause severe burns.

**INGESTION:** Corrosive to mucous membranes of the mouth, esophagus, stomach & throat.

**INHALATION:** Avoid mist, can be a severe irritant.

**ACUTE TOXICITY:** Eye, skin, lung burning may be caused with exposure to mist. Avoid mist.

**TARGET ORGAN STATEMENT:** Contains material which may cause damage to gastrointestinal tract and respiratory tract.

Note to Physician: All treatments should be based on observed signs and symptoms of distress in the patient. Medical conditions that may be aggravated by exposure include asthma, bronchitis, emphysema and other lung diseases and chronic nose, sinus or throat conditions. Severity of the burn is generally determined by the concentration of the solution and the duration of exposure. In the event of skin or eye contact, immediate and thorough flushing is essential. Continued washing of the effected area with cold or iced water will be helpful in removing the last traces of sulfuric acid. Cream or ointments should not be applied before or during the washing phase of the treatment. See section 2 for further details.

### Eyes

Causes serious eye damage.

### Inhalation

Causes serious eye damage.

## 5. Fire-fighting measures

### 5.1. Extinguishing media

For small fires, use dry chemical or carbon dioxide. For large fires, flood fire area with water from a distance. Expect violent reaction with water. Do not get solid stream of water on spilled material.

### 5.2. Special hazards arising from the substance or mixture

Hazardous decomposition: Oxides of sulfur at high temperatures. Hazardous gases may evolve on contact with

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chemicals such as cyanides, sulfides, and carbides.

Do not breathe mist / vapors / spray.

**5.3. Advice for fire-fighters**

Wear self-contained breathing apparatus and protective clothing.

**ERG Guide No. ---137**

**6. Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

Put on appropriate personal protective equipment (see section 8).

**6.2. Environmental precautions**

Do not allow spills to enter drains or waterways.

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

**6.3. Methods and material for containment and cleaning up**

Absorb spill with vermiculite or other inert material, then place in a container for chemical waste.

For Large Spills: Flush spill area with water spray. Prevent run-off from entering drains, sewers, or streams, collect run-off.

**7. Handling and storage**

**7.1. Precautions for safe handling**

Wear appropriate Personal Protection Equipment. Do not breathe sprays or mists. Do not ingest. Do not get in eyes, on skin or on clothing. Keep ignition sources away from sulfuric acid storage, handling and transportation equipment.

Handling Procedures and Equipment: Carbon steel or stainless steel materials are suitable for use for acid concentrations equal to or greater than 93%. However, the effect of lower concentrations on the materials of construction can be very complex. Contact product supplier for specific recommendations when handling sulfuric acid at strengths less than 77%.

Sulfuric acid will attack some forms of plastics and coatings. Always add acid to water - not water to acid. If kept in upper floors of building, floors should be acid proof with drains to a recovery tank.  
See section 2 for further details. - [Prevention]:

**7.2. Conditions for safe storage, including any incompatibilities**

Handle containers carefully to prevent damage and spillage.

Store between -5C and 40C.

Incompatible materials: Acids react with most metals to release hydrogen gas which can form explosive mixtures in air. Water, alkaline solutions, metals, metal powder, carbides, chlorates, fuminates, nitrates, picrates, strong oxidizers, reducers, or combustible organics.

Hazardous gases may evolve on contact with chemicals such as cyanides, sulfides, and carbides.

Storage Temperature: Store above freezing point. Elevated temperatures will increase the corrosion rate of most metals.

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Storage Requirements: Store packaged acid in a dry, well, ventilated location away from combustibles, oxidizers, bases, or metallic powders. Storage tanks should be protected from water ingress, be well ventilated, and maintained structurally in a safe and reliable condition.

See section 2 for further details. - [Storage]:

### 7.3. Specific end use(s)

No data available.

## 8. Exposure controls and personal protection

### 8.1. Control parameters

#### Exposure

CAS No.	Ingredient	Source	Value
527-07-1	SODIUM GLUCONATE	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
1310-72-2	SODIUM HYDROXIDE	OSHA	2 mg/m3
		ACGIH	2 mg/m3
		NIOSH	No Established Limit
		Supplier	No Established Limit
N/A	SURFACTANT PACKAGE	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
N/A	WATER	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit

#### Carcinogen Data

CAS No.	Ingredient	Source	Value
527-07-01	SODIUM GLUCONATE	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
1310-72-2	SODIUM HYDROXIDE	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
N/A	SURFACTANT PACKAGE	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
N/A	WATER	OSHA	Select Carcinogen: No

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	NTP	Known: No; Suspected: No
	IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

### 8.2. Exposure controls

<b>Respiratory</b>	A NIOSH/MSHA approved air-purifying respirator equipped with acid gas/fume, dust, and mist cartridges for concentrations up to 10 mg 1m3. An air-supplied respirator if concentrations are higher or unknown.
<b>Eyes</b>	Tight-fitting chemical goggles and face shield.
<b>Skin</b>	Impervious (Le., neoprene, PVC) gloves, coveralls, boots and/or other acid resistant protective clothing.
<b>Engineering Controls</b>	Local exhaust ventilation required.
<b>Other Work Practices</b>	Where there is a danger of spilling or splashing, acid resistant aprons or suits should be worn. Trouser legs should be worn outside (not tucked in) rubber boots. Safety showers and eyewash fountains should be installed in storage and handling areas. Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details. - [Prevention]:

## 9. Physical and chemical properties

<b>Appearance</b>	Clear or Colored Liquid
<b>Odor</b>	Sharp
<b>Odor threshold</b>	Not Measured
<b>pH</b>	Not Measured
<b>Melting point / freezing point</b>	77.67%: -11.2° C (+11.6° F); 93.19%: -29.5° C (-21.1° F); 98%: -1.1° C (30° F)
<b>Initial boiling point and boiling range</b>	77.67%: 193° C (380° F); 93.19%: 276° C (529° F); 98%: 330° C (626° F)
<b>Flash Point</b>	None
<b>Evaporation rate (Ether = 1)</b>	Not Measured
<b>Flammability (solid, gas)</b>	Not Applicable
<b>Upper/lower flammability or explosive limits</b>	<b>Lower Explosive Limit:</b> 135C(275F): NA <b>Upper Explosive Limit:</b> 199C(390F): NA
<b>Vapor pressure (Pa)</b>	77.67%: 1.2 mmhg; 93.19%: 0.0016 mmhg; 98%: 0.002 mmhg (at 40 C/102 F)
<b>Vapor Density</b>	3.4, sulfuric acid component (Air = 1)
<b>Specific Gravity</b>	77.67%: 1.7059; 93.19%: 1.8354; 98%: 1.8437 (at 15 C/60 F)
<b>Solubility in Water</b>	Insoluble
<b>Partition coefficient n-octanol/water (Log Kow)</b>	Not Measured
<b>Auto-ignition temperature</b>	(ASTM D 2155): Not combustible

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Decomposition temperature	Not Measured
Viscosity (cSt)	Not Measured
Volatiles (% by weight)	NA
Octanol/Water Partition Coefficient	NA

### 9.2. Other information

No other relevant information.

## 10. Stability and reactivity

### 10.1. Reactivity

Hazardous Polymerization will not occur.

### 10.2. Chemical stability

Stable under normal circumstances.

### 10.3. Possibility of hazardous reactions

Reacts with some bases.

### 10.4. Conditions to avoid

Keep away from extreme heat and extreme cold.

### 10.5. Incompatible materials

Acids react with most metals to release hydrogen gas which can form explosive mixtures in air. Water, alkaline solutions, metals, metal powder, carbides, chlorates, fuminates, nitrates, picrates, strong oxidizers, reducers, or combustible organics.

Hazardous gases may evolve on contact with chemicals such as cyanides, sulfides, and carbides.

### 10.6. Hazardous decomposition products

Oxides of sulfur at high temperatures. Hazardous gases may evolve on contact with chemicals such as cyanides, sulfides, and carbides.

## 11. Toxicological information

### Acute toxicity

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LC50, mg/L/4hr	Inhalation Dust/Mist LC50, mg/L/4hr	Inhalation Gas LC50, ppm
SODIUM GLUCONATE (527-07-01)	No data available	No data available	No data available	No data available	No data available
SODIUM HYDROXIDE (1310-72-2)	500 mg/kg (rabbit)	No data available	No data available	No data available	No data available
SURFACTANT PACKAGE (N/A)	No data available	No data available	No data available	No data available	No data available
Water (N/A)	No data available	No data available	No data available	No data available	No data available

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Classification	Category	Hazard Description
Acute toxicity (oral)	---	Not Applicable

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Acute toxicity (dermal)	---	Not Applicable
Acute toxicity (inhalation)	---	Not Applicable
Skin corrosion/irritation	1A	Causes severe skin burns and eye damage.
Serious eye damage/irritation	1	Causes serious eye damage.
Respiratory sensitization	---	Not Applicable
Skin sensitization	---	Not Applicable
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	---	Not Applicable
Reproductive toxicity	---	Not Applicable
STOT-single exposure	---	Not Applicable
STOT-repeated exposure	---	Not Applicable
Aspiration hazard	---	Not Applicable

**12. Ecological information**

**12.1. Toxicity**

The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and GHS and is not classified as dangerous for the environment, but contains substance(s) dangerous for the environment. See section 3 for details

**Aquatic Ecotoxicity**

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
SODIUM GLUCONATE (527-07-01)	Not Available	Not Available	Not Available
SODIUM HYDROXIDE (1310-72-2)	Not Available	Not Available	Not Available
SURFACTANT PACKAGE (N/A)	Not Available	Not Available	Not Available
Water (N/A)	Not Available	Not Available	Not Available

**12.2. Persistence and degradability**

There is no data available on the preparation itself.

**12.3. Bioaccumulative potential**

Not Measured

**12.4. Mobility in soil**

No data available.

**12.5. Results of PBT and vPvB assessment**

This product contains no PBT/vPvB chemicals.

**12.6. Other adverse effects**

No data available.



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**13. Disposal considerations**

**13.1. Waste treatment methods**

Observe all federal, state and local regulations when disposing of this substance.

**14. Transport information**

	<b>DOT (Domestic Surface Transportation)</b>	<b>IMO / IMDG (Ocean Transportation)</b>	<b>ICAO/IATA</b>
<b>14.1. UN number</b>	UN 1824	UN 1824	UN1824
<b>14.2. UN proper shipping name</b>	UN 1824, Corrosive Liquid, NOS (Contains Sodium hydroxide), 8, II	Corrosive UN 1824 Liquid, NOS (Contains Sodium hydroxide)	Corrosive UN 1824 Liquid, NOS (Contains Sodium hydroxide)
<b>14.3. Transport hazard class(es)</b>	<b>DOT Hazard Class: 8</b>	<b>IMDG: 8</b> <b>Sub Class:</b> Not Applicable	<b>Air Class: 8</b>
<b>14.4. Packing group</b>	II	II	II

**14.5. Environmental hazards**

**IMDG** Marine Pollutant: No

**14.6. Special precautions for user**

No further information

**15. Regulatory information**

<b>Regulatory Overview</b>	The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.
<b>Toxic Substance Control Act ( TSCA)</b>	All components of this material are either listed or exempt from listing on the TSCA Inventory.
<b>WHMIS Classification</b>	D2B E
<b>US EPA Tier II Hazards</b>	<b>Fire:</b> No <b>Sudden Release of Pressure:</b> No <b>Reactive:</b> Yes <b>Immediate (Acute):</b> Yes <b>Delayed (Chronic):</b> No

**EPCRA 311/312 Chemicals and RQs: (lbs)**

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**EPCRA 302 Extremely Hazardous:**

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**EPCRA 313 Extremely Hazardous:**

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

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**Proposition 65 - Carcinogens (>0.0%):**

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**Proposition 65 - Developmental Toxins (>0.0%):** To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**Proposition 65 - Female Repro Toxins (>0.0%):** To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**Proposition 65 - Male Repro Toxins (>0.0%):**

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**New Jersey RTK Substances (>1%):**

**Pennsylvania RTK Substances (>1%):**

**16. Other information**

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:

H314 Causes severe skin burns and eye damage.

**This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.**

The opinions expressed are those of qualified experts within ComStar International Inc. We believe that the information contained is current as of the date of the Safety Data Sheet. Since the use of this information and of these opinions and the conditions of the use of the product are not within the control of ComStar International Inc., it is the user's obligation to determine the conditions of safe use of the product.

End of Document



# MATERIAL SAFETY DATA SHEET

Complies with OSHA Hazard Communication  
And WHIMS Standard 29 CFR 1910-1200

Print Date: 4/6/2011

**Product Name: HD Condenser Coil Cleaner Product Number: F1-31**

## I - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Manufacturer:** ComStar International Inc. **Tel:** 718-445-7900, 800-328-0142  
**Address:** 20-45 128<sup>th</sup> Street, College Point, NY 11356 **Fax:** 718-353-5998

**Chemical Name:** Blended Formula

**Synonym(s):** None

## II - COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENTS	OSHA PEL	ACGIH TLV	CAS NO.
SODIUM GLUCONATE	N/A	N/A	527-07-01
SODIUM HYDROXIDE	2 mg/m3	2 mg/m3	1310-72-2

## III - HAZARDS IDENTIFICATION

**WARNING!** CAUSES EYE IRRITATION. MAY FORM EXPLOSIVE PEROXIDES.

HMIS Hazard Ratings: Health - 2, Flammability - 0, Chemical Reactivity - 0

NFPA Hazard Ratings: Health - 2, Flammability - 0, Chemical Reactivity - 0

**NOTE:** HMIS and NFPA ratings involve data and interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.



## IV - FIRST-AID MEASURES

**Inhalation:** If symptomatic, move to fresh air. Get medical attention if symptoms persist.

**Eyes:** Immediately flush with plenty of water for at least 15 minutes. Get medical attention.

**Skin:** Remove contaminated clothing, wash affected skin with soap and water immediately. Get medical attention if symptoms occur.

**Ingestion:** Drink plenty of water. Get immediate medical attention.

## V - FIRE FIGHTING MEASURES

**Extinguishing Media:** Water, CO<sub>2</sub>, Universal type foams, dry chemical

**Special Fire Fighting Procedures:** Wear self-contained breathing apparatus and protective clothing.

**Hazardous Combustion Products:** Unknown

**Unusual Fire and Exposure Hazards:** None known. Keep product cool.

## VI - ACCIDENTAL RELEASE MEASURES

Absorb spill with vermiculite or other inert material, then place in a container for chemical waste.

**For Large Spills:** Flush spill area with water spray. Prevent run-off from entering drains, sewers, or streams, collect run-off.

## VII - HANDLING AND STORAGE

**Personal Precautionary Measures:** Avoid contact with eyes and skin. Wash thoroughly after handling. Do not breathe vapors or fumes.

**Prevention of Fire and Explosion:** Keep from contact with oxidizing materials, alkalis and acids. Store away from heat, sunlight and moisture.

## VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION

**Exposure Limits:**

**ACGIH Threshold Limit Value (TLV):** see section II

**OSHA (USA) Permissible Exposure Limit (PEL):** see section II

**Ventilation:** Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Supplementary local exhaust ventilation, closed systems, or respiratory protection may be needed in special circumstances such as poorly ventilated spaces, evaporation from large surfaces, spraying, heating, etc.

**Respiratory Protection:** If engineering controls do not maintain airborne concentrations to an acceptable level, a NIOSH approved respirator must be worn.

**Respirator Type:** Organic vapor. If respirators are used, a program should be instituted to assure Compliance with OSHA Standard 29 CFR 1910.134.

**Eye Protection:** Wear safety glasses with side shields (or goggles) and a face shield.

**Skin Protection:** It is a good industrial hygiene practice to minimize skin contact.

**Recommended Decontamination Facilities:** Eye bath, washing facilities

## IX - PHYSICAL AND CHEMICAL PROPERTIES

Color: Light yellow

Odor: Slight odor

Odor Threshold: not available

Specific Gravity (H<sub>2</sub>O = 1): 2.13

Vapor Pressure at 70° F: > 0.01

Vapor Density (Air = 1): N/A

Evaporation Rate (n-butyl acetate = 1): > 1

Volatile Fraction by Weight: N/A

Boiling Point: 370° F

Melting Point: N/A

Viscosity at 25° C (77° F): N/A

Solubility in Water: Soluble - complete

Octanol/ Water Partition Coefficient: not available

Flash Point (° F): None

Lower Explosive Limit 135° C (275° F): N/A

Upper Explosive Limit 199° C (390° F): N/A

Auto ignition Temperature (ASTM D 2155): N/A

## X - STABILITY AND REACTIVITY

**Stability:** Product is considered stable.

**Incompatibility:** strong oxidizing agents, alkalis and acids

**Hazardous Polymerization:** not known to polymerize.

## XI - TOXICOLOGICAL INFORMATION

**Inhalation:** Low hazard for usual industrial handling by trained personnel.

**Eyes:** Causes irritation and possible chemical burns.

**Skin:** Low hazard for usual industrial handling by trained personnel, see label warnings.

**Ingestion:** Dangerous if ingested.

**Acute Toxicity Data:**

**Oral LD-50 (rabbit):** not available

**Inhalation LC-50:** not available

**Human Dermal Exposure:** Regardless of concentration, the severity of damage and extent of its irreversibility increases with length of contact time. Prolonged contact with sodium hydroxide solutions of =>1% can cause a high degree of tissue destruction. The latent period, following skin contact during which no sensation of irritation occurs, varies from several hours for 0.4 – 4% solutions of 3 minutes with concentrations of 25% or greater.

## XII - ECOLOGICAL INFORMATION

**Introduction:** Leaks should be stopped. Spills should be contained and cleaned up immediately. Large liquid spills should be removed by using a vacuum truck. Solid spills should be scooped up and placed in approved containers for disposal. The spill area should then be flushed with water followed by liberal covering of sodium bicarbonate. All clean-up material should be removed and placed in approved containers, labeled and stored in a safe place to await proper treatment or disposal. Spills on areas other than pavement, e.g., dirt or sand, may be handled by removing the affected soils and placing in approved containers. Persons performing clean-up work should wear adequate personal protective equipment and clothing. Spills or releases should be reported, if required, to the appropriate local, state and federal regulatory agencies.

## XIII - DISPOSAL CONSIDERATIONS

Discharge, treatment, or disposal may be subject to national, state, or local laws. Check with state and local officials before disposal.

## XIV - TRANSPORT INFORMATION

**DOT (USA) Status:** Corrosive Liquid, NOS (Contains Sodium hydroxide) /8/UN 1760/II

**TDG (Canada) Status:** Corrosive Liquid, NOS (Contains Sodium hydroxide) /8/UN 1760/II

**Air – International Civil Aviation Organization (ICAO)**

**ICAO Status:** Check with air freight forwarder for ruling.

**Sea – International Maritime Dangerous Goods (IMDG)**

**IMDG Status:** Check with freight forwarder for ruling.

## XV - REGULATORY INFORMATION

This document has been prepared in accordance with the MSDS requirements of the OSHA Hazard Communication Standard 29 CFR 910.1200.

OSHA hazardous chemical(s): trade secret (blended formula).

Material(s) known to the State of California to cause cancer: none

Material(s) known to the State of California to cause adverse reproductive effects: none

Massachusetts Substance List: none.

New Jersey Workplace Hazardous Substance List: none

Pennsylvania Hazardous Substance List: none

This document has been prepared in accordance with the MSDS requirements of the WHMIS Controlled Products Regulation.

**WHMIS (Canada) Ingredient Disclosure List:** trade secret (blended formula).

**WHMIS (Canada) Status:** not listed.

**WHMIS (Canada) controlled material(s):** not listed.

**WHMIS (Canada) Hazard Classification:** not classified.

**Carcinogenicity Classification (components present at 0.1% or more):** None

**International Agency for Research on Cancer (IARC):** Not listed

**American Conference of Governmental Industrial Hygienist (ACGIH):** Not listed

**National Toxicology Program (NTP):** not listed

**Occupational Safety and Health Administration (OSHA):** Not listed

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372: None.

SARA (U.S.A.) Sections 311 and 312 hazard classification(s): Not listed.

**NOTE:** *The opinions expressed are those of qualified experts within ComStar International Inc. We believe that the information contained is current as of the date of the Material Safety Data Sheet. Since the use of this information and of these opinions and the conditions of the use of the product are not within the control of ComStar International Inc., it is the user's obligation to determine the conditions of safe use of the product.*

MATERIAL SAFETY DATA SHEET - **RENEWZ™**  
**HURRI-CLEAN COIL BRIGHTENER**  
**+ CLEANER**

ITEM# **FI-31**  
MFR# **82662**  
MSDS ITEM: **FI-31STE**

MSDS0224  
Ver. No.1  
Ver. Date June 22, 2000

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Z0186**

PRODUCT NAME Renewz™  
PRODUCT CODE 82644, 82646, 82650  
CHEMICAL FAMILY: Inorganic  
USE: Condenser Coil Cleaner  
MANUFACTURER / SUPPLIER  
RectorSeal  
2601 Spenwick  
Houston, Texas 77055 USA

EMERGENCY TELEPHONE NUMBERS:  
Chemtrec 24 hours: (800) 424-9300  
RectorSeal: (713) 263-8001

NON EMERGENCY TELEPHONE NUMBERS:  
Technical Service: (800) 231-3345

SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS	CAS NO.	APPROX	OSHA PEL	ACGIH TLV	OTHER LIMITS	HMIS	NFPA
		%					
Sodium Hydroxide	1310-73-2	15 Max	CL 2 mg/m3	CL 2 mg/m3	N/A	H3,F0,R1	H3,F0,R1
Potassium Silicate	1312-76-1	2	N/D	N/D	N/D	N/D	N/D

SECTION 3 HAZARDS IDENTIFICATION

SUMMARY OF ACUTE HAZARDS Exposure to human tissue will result in irritation and chemical burns.

<u>ROUTE OF EXPOSURE</u>	<u>SIGNS AND SYMPTOMS</u>	<u>PRIMARY ROUTE(S)</u>
INHALATION:	Extremely corrosive to respiratory system.	Yes
EYE CONTACT:	Corrosive, contact causes severe eye burns.	Yes
SKIN CONTACT:	Corrosive to skin.	Yes
INGESTION:	Extremely corrosive. Swallowing large quantities can cause death.	No

SUMMARY OF CHRONIC HAZARDS: Exposure to human tissue will result in irritation and chemical burns.  
MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: None known.

SECTION 4 FIRST AID MEASURES

INHALATION: If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain emergency medical attention. Prompt action is essential.  
EYE CONTACT: Immediately flush with large amounts of water for at least 15 minutes. Get prompt medical attention.  
SKIN CONTACT: Flush with large amounts of water. If irritation or burns occur, seek immediate medical attention.  
INGESTION: Give large amounts of water. DO NOT induce vomiting. Get prompt medical attention.

SECTION 5 FIRE FIGHTING MEASURES

FLASH POINT: N/A FLAMMABILITY LIMITS: LEL: N/D UEL: N/D  
EXTINGUISHING MEDIA: Use agents suitable for surrounding fires.  
SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained full face piece breathing apparatus and full body protective clothing. Hazardous decomposition products possible (see Section 10). Evacuate area. Dike area as run-off may create additional environmental contamination.  
UNUSUAL FIRE AND EXPLOSION HAZARDS: Decomposition forms toxic fumes of sodium oxide.

SECTION 6 ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Keep people away. Wear chemical protective clothing. Stop discharge if possible. Isolate and remove discharged material. Flush with water, rinse with dilute acetic acid.

SECTION 7 STORAGE AND HANDLING

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep container closed and upright when not in use. Store only in polyethylene or glass containers. DO NOT USE METAL CONTAINERS.  
OTHER PRECAUTIONS: Do not permit workers to handle Renewz without proper training or proper equipment. Store in well-sealed containers, which are protected from physical damage. Empty containers may contain residues and vapors; treat as if full and observe all product precautions. Do not reuse. KEEP OUT OF REACH OF CHILDREN.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION (SPECIFY TYPE): In confined, poorly ventilated areas, use NIOSH/MSHA approved self-contained breathing apparatus. None required for normal use in adequately ventilated areas where TLV is not exceeded.  
VENTILATION - LOCAL EXHAUST: Acceptable SPECIAL: N/A  
MECHANICAL (GENERAL): Acceptable OTHER: N/A  
PROTECTIVE GLOVES: Caustic resistant gloves.  
EYE PROTECTION: Face shield and chemical splash goggles (ANSI Z-87.1 or equivalent).  
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Caustic resistant body covering recommended. Neoprene soled boots.  
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°F (>100°C) @ 760mm Hg  
 VAPOR PRESSURE (mm Hg): 1 @ 77°F (20°C)  
 VAPOR DENSITY (AIR = 1): > 1  
 SOLUBILITY IN WATER: Soluble

SPECIFIC GRAVITY (H<sub>2</sub>O = 1): 1.2485  
 MELTING POINT: N/A  
 EVAPORATION RATE (ETHYL ACETATE = 1): < 1.0  
 APPEARANCE/ODOR: Clear Yellow Liquid/ Little or No Odor

**SECTION 10 STABILITY AND REACTIVITY**

STABILITY: Stable  
 CONDITIONS TO AVOID: N/A  
 INCOMPATIBILITY (MATERIALS TO AVOID): Acids, flammable liquids, organics, halogens, metals, nitromethane. When wet, attacks chemically active metals such as aluminum, tin, lead, and zinc to produce flammable hydrogen gas.  
 HAZARDOUS DECOMPOSITION PRODUCTS: Decomposition forms toxic fumes of sodium oxide.  
 HAZARDOUS POLYMERIZATION: Will not occur.

**SECTION 11 TOXICOLOGY INFORMATION**

CARCINOGENICITY: NTP: No IARC MONOGRAPHS: No OSHA REGULATED: No

<u>SUBSTANCE</u>	<u>LD50</u>	<u>LC50</u>
Sodium Hydroxide	Oral-Rabbit, adult LDLo:500 mg/kg	N/D
Potassium Silicate	N/D	N/D

**SECTION 12 ECOLOGICAL INFORMATION**

<u>SUBSTANCE</u>	<u>FOOD CHAIN CON POTENTIAL</u>	<u>WATERFOWL TOXICITY</u>	<u>BOD</u>	<u>AQUATIC TOXICITY</u>
Sodium Hydroxide	None	N/A	None	125 ppm/96 hr/mosquito fish/TLm
Potassium Silicate	N/D	N/D	N/D	N/D

**SECTION 13 DISPOSAL CONSIDERATIONS**

WASTE DISPOSAL METHOD: 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: Sodium Hydroxide, Solution, UN 1824, Class 8, PG II, ERG#154  
 OCEAN (IMDG): Sodium Hydroxide, Solution, UN 1824, Class 8, PG II, IMDG#8226, EMS#8-06  
 AIR (IATA): Sodium Hydroxide, Solution, UN 1824, Class 8, PG II, ERG#154  
 WHMIS (CANADA): Class E

**SECTION 15 REGULATORY INFORMATION**

<u>SUBSTANCE</u>	<u>SARA 313</u>	<u>TSCA INVENTORY</u>	<u>CERCLA RQ</u>	<u>RCRA CODE</u>
Sodium Hydroxide	No	Yes	1,000 lb.	N/A
Potassium Silicate	No	Yes	N/A	N/A

**SECTION 16 OTHER INFORMATION**

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