MATERIAL SAFETY DATA SHEET

MSDS 0239

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
Liquid Descalit

PRODUCT CODES
80902, 80904

CHEMICAL FAMILY
Inorganic Acids

USE
Scale Remover

MANUFACTURER'S NAME
The RectorSeal Corporation
2601 Spenwick Drive
Houston, Texas 77055 USA

DATE OF VALIDATION
July 26, 2012

DATE OF PREPARATION
July 26, 2012

HMIS CODES

Health	3
Flammability	0
Reactivity	1
PPI	D

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
Corrosive
TARGET ORGANS
Liver, Blood, Bone marrow
GHS CLASSIFICATION
PHYSICAL HAZARDS
N/A
HEALTH HAZARDS
Skin corrosion (Category 1B)
Serious eye damage (Category 1)
Specific target organ toxicity - single exposure (Category 3)

GHS Label elements, including precautionary statements
Pictogram: Corrosive, Irritation
Signal Word: Danger
Hazard statement(s)
H314 - Causes severe skin burns and eye damage.
H335 - May cause respiratory irritation.
Precautionary statement(s)
P260 - Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection.
P284 - Wear respiratory protection.
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.
Hazard Statements
H303 - May be harmful if swallowed.
H314 - Causes severe skin burns and eye damage.

SUMMARY OF ACUTE HAZARDS

Corrosive. Causes severe skin and eye burns. Vapors may irritate eyes, nose, throat. Ingestion will cause chemical burns to digestive system and mucosal surface. May be fatal.

INHALATION

Vapors irritating to eyes, nose and throat. May be fatal.

EYE CONTACT

Corrosive. Causes severe eye burns. Can cause severe damage including blindness.

SKIN CONTACT

Corrosive. Causes severe skin burns.

INGESTION

Chemical burns to digestive system and mucosal surface. May be fatal.

SUMMARY OF CHRONIC HAZARDS

Bronchitis, pulmonary, chemical burns and chemical pneumonitus.

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.

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Section 3 -- COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT: Hydrochloric Acid
PERCENTAGE BY WEIGHT: 27.2
CAS NUMBER: 7647-01-0
EC# : 231-595-7

INGREDIENT: Ketoamino
PERCENTAGE BY WEIGHT: 1.05
CAS NUMBER: 70776-86-2
EC# : 274-880-1

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Section 4 -- FIRST AID MEASURES

If INHALED:	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.
If on SKIN:	Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.
If in EYES:	Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Call a physician immediately.
If SWALLOWED:	If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

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Section 5 -- FIRE FIGHTING MEASURES

EXTINGUSING 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: Toxic fumes of chlorine, and HCL may be

produced in fire.

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
Hydrochloric Acid	
ACGIH TLV CL	5 ppm
OSHA PEL CL	5 ppm
Ketoamino	
ACGIH TLV	N/D
OSHA PEL	N/D

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:	214 F (101 C) @ 760mm Hg
SPECIFIC GRAVITY (H20 = 1):	1.11
VAPOR PRESSURE (mm Hg):	N/A
MELTING POINT:	N/A
VAPOR DENSITY (AIR = 1):	N/A
EVAPORATION RATE (ETHYL ACETATE = 1):	N/A
APPEARANCE/ODOR:	Amber Liquid / Irritating Odor
SOLUBILITY IN WATER:	Soluble

FLASH POINT: None
LOWER EXPLOSION LIMIT: N/D
UPPER EXPLOSION LIMIT: N/D
VOLATILE ORGANIC COMPOUNDS(VOC)Content
(Theoretical Percentage By Weight): 0% or (0 g/L)

Section 10 -- STABILITY AND REACTIVITY

STABILITY: Stable
CONDITIONS TO AVOID: Incompatables
INCOMPATIBILITY (MATERIALS TO AVOID): A strong acid; violent reaction with bases; forms explosive hydrogen gas with base metals; oxidizers form toxic chlorine gas; reaction with sulfuric acid forms corrosive hydrochloric acid gas. Corrosive fume on contact with air. Highly corrosive to most metals with evolution of hydrogen gas, which may form explosive mixtures with air. Reacts with hydroxides, amines, alkalis, copper, brass, zinc.
HAZARDOUS DECOMPOSITION PRODUCTS: Toxic fumes of chlorine, and HCL.
HAZARDOUS POLYMERIZATION: Will not occur.

Section 11 -- TOXICOLOGY INFORMATION

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

TOXICOLOGY DATA
Ingredient Name

Hydrochloric Acid
Oral-Rabbit, adult LD50:900 mg/kg
Inhalation-Rat LC50:3124 ppm/1H

Ketoamino
Oral-Rat LD50:N/D
Inhalation-Rat LC50:N/D

Section 12 -- Ecological Information

ECOLOGICAL DATA
Ingredient Name

Hydrochloric Acid

Food Chain Concentration Potential	None
WATERFOWL TOXICITY	N/A
BOD	None
AQUATIC TOXICITY	282 ppm/96 hr/mosquito

Ketoamino

Food Chain Concentration Potential	N/D
WATERFOWL TOXICITY	N/D
BOD	N/D
AQUATIC TOXICITY	N/D

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: UN1789, Hydrochloric acid, solution, class 8, PG II, ERG#157
OCEAN (IMDG): UN1789, Hydrochloric acid, solution, class 8, PG II, EMS-No: F-A, S-B
AIR (IATA): UN1789, Hydrochloric acid, solution, class 8, PG II, ERG#157
WHMIS (CANADA): Class E

Section 15 -- REGULATORY INFORMATION

REGULATORY DATA

Ingredient Name		
Hydrochloric Acid		
	SARA 313	Yes
	TSCA Inventory	Yes
	CERCLA RQ	5,000 lb.
	RCRA Code	N/A
Ketoamino		
	SARA 313	No
	TSCA Inventory	Yes
	CERCLA RQ	N/A
	RCRA Code	N/A

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