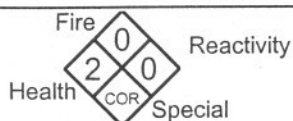


HAZARD RATING

4-EXTREME
3-HIGH
2-MODERATE
1-SLIGHT



MATERIAL SAFETY DATA SHEET

(Prepared according to 29 CFR 1910. 1200)

Date Prepared: 3-11-05

SECTION 1 - PRODUCT IDENTIFICATION

Company Name Cardinal Chemical Systems, Inc. Emergency Telephone No. 314-757-6182
Address P.O. Box 45007, St. Louis, MO 63145-5007 Information Telephone No. 314-757-6182
Product Name / ID# Liquid Sour (300304) Product Type Acid Sour Neutralizer ☒ Proprietary Product

SECTION 2 - HAZARDOUS INGREDIENTS

Chemical Name/Common Name	Cas No.	Percent (optional)	TLV (Source)
*Phosphoric Acid	7664-38-2	< 25%	1mg/m3

☒ * Substances ☐ Contains no substances - subject to the reporting requirements of SARA 313 and 40 CFR Part 372.

SECTION 3 - PHYSICAL DATA

Boiling Point (°F) >212°F Specific Gravity (H₂O=1.0) 1.114 ± 0.005 pH < 1.0 % VOC (ww) 0%
Solubility In Water ☒ Complete ☐ Insoluble ☐ Emulsifiable or (Dispersible) ☐ Slight (or Partial)
Evaporation Rate (vs H₂O) ☐ Faster ☐ Slower ☒ About the Same Vapor Pressure NA Vapor Density NA
Appearance and Odor Clear, yellow colored liquid. Nil odor.

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

Flash Point (T.C.C.) ☒ None to boiling Flammable Limits Upper NA Lower NA
Extinguishing Media NA
Special Fire Fighting Procedures NA
Unusual Fire Explosion Hazards NA

SECTION 5 - REACTIVE DATA

Stability Stable Incompatibility Bases; Common metals (i.e. mild steel, copper, brass, bronze)
Hazardous Decomposition Products Phosphoric oxide fumes under fire condition. Contact with common metals produces Hydrogen Gas

SECTION 6 - HEALTH HAZARDS

Threshold Limit Value Product See Section 2 for Ingredients TLV ☒ None Established ☐ Not Applicable Primary routes of Exposure ☒ Eyes ☒ Skin ☒ Oral ☒ Inhalation
Signs Symptoms of Over-exposure (Acute) May cause irritation or burns to eyes or skin depending on the extent of exposure.
Severe internal irritation and damage can result if ingested. Mist inhalation may irritate respiratory system.
Signs Symptoms of Over-exposure (Chronic) Unknown
Medical Conditions Aggravated by Over-exposure Unknown
Carcinogen/Suspected Carcinogen Ingredients: Unknown ☐ NTP ☐ IARC ☐ OSHA ☒ None

SECTION 7 - FIRST AID PROCEDURES - (If any Condition persists - Consult a physician.)

Eyes Flush with water for 15 minutes. If relief is not readily apparent consult a physician.
Skin Remove contaminated clothing and wash before re use. Wash with water for 10-15 minutes.
Ingestion Do NOT induce vomiting. Drink plenty of water. Call a physician immediately.
Inhalation Remove to fresh air. If qualified give oxygen or artificial respiration as needed and/or seek medical help.

SECTION 8 - SPECIAL PROTECTION INFORMATION

Respiratory Protection None normally required. If airborne liquid is generated and ventilation is poor use NIOSH approved respirator.
Ventilation requirements ☒ Local Exhaust ☒ Mechanical To keep below any listed TLV's and/or for general good ventilation.
Protective Gloves Rubber Gloves Eye Protection Chemical Goggles
Other Protective Clothing When handling larger volume of material or when splashing is anticipated, wear impervious clothing to prevent contact with skin or other clothing.

SECTION 9 - SPILL OR LEAK PROCEDURES

Steps to be Taken if Released or Spilled Contain spill. Neutralize with weak base solution. Vacuum up or soak up on inert absorbant and place in suitable container(s) for disposal. Rinse any residue with plenty of water.
Waste Disposal Methods Probable to flush small neutralized, diluted solutions to sanitary sewer. Check all government regulations.
SECTION 10 - STORAGE AND HANDLING INFORMATION
Precautions to be Taken in handling and Storage Store away from bases. Keep out of reach of children. Wash thoroughly after handling.