



# SAFETY DATA SHEET

## SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **RAM-OUT IV™**  
PRODUCT USE: Drain Line Opener  
PRODUCT NUMBER: K-724  
COMPANY: Mfg for K & K Chemical  
PHYSICAL ADDRESS: 1303 Industrial Drive, Royse City, Texas, 75189  
MAILING ADDRESS: PO Box 1059, Royse City, Texas, 75189  
COMPANY PHONE: 800-958-6921  
WEB ADDRESS: KandKChemical.com  
EMERGENCY PHONE: INFOTRAC (24/7) 1-800-535-5053 (USA)

## SECTION 2. HAZARD(S) IDENTIFICATION

**DANGER**



### **HAZARD CATEGORIES:**

Corrosive to Metals: 1  
Skin Corrosion/Irritation: 1  
Specific Target Organ Toxicity (Single Exposure): 1  
Carcinogenicity: 2

### **HAZARD STATEMENTS:**

May be corrosive to metals.  
Causes severe skin burns and eye damage.  
Causes damage to gastrointestinal system, respiratory system, eyes, skin.  
Suspected of causing cancer.

### **PRECAUTIONARY STATEMENTS:**

#### **Prevention:**

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Wear protective gloves, protective clothing, eye protection and face protection.  
Do not breathe mist, vapors or spray.  
Use only outdoors or in a well-ventilated area.  
Wash exposed skin thoroughly after handling.

#### **Response:**

**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 or doctor.

**IF SWALLOWED:** Rinse mouth with water. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor.

**IF ON SKIN:** Take off immediately all contaminated clothing. Rinse skin with water or shower. Immediately call a POISON CENTER or doctor. Wash contaminated clothing before reuse.

**IF INHALED:** Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor.

### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

<b>CHEMICAL NAME</b>	<b>SYNONYMS</b>	<b>CAS #</b>	<b>WT %</b>
Sulfuric acid	Battery acid, oil of vitriol	7664-93-9	95 - 98

### **SECTION 4. FIRST AID MEASURES**

**IF IN EYES:** Flush eyes immediately with a directed stream of water for at least 30 minutes while forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue.

SPEED IS ESSENTIAL. Urgently seek medical assistance. Transport promptly to a hospital or medical center.

**IF SWALLOWED:** If person is conscious, give them 8 oz. of water or milk immediately to dilute acid. Do NOT induce vomiting. Do not leave person unattended. GET MEDICAL ATTENTION IMMEDIATELY.

**IF ON SKIN:** Take off immediately all contaminated clothing, shoes and constrictive jewelry under a safety shower. Rinse skin with water or shower for at least 15 minutes. If skin surface is damaged, apply a clean dressing. GET MEDICAL ATTENTION IMMEDIATELY. Wash contaminated clothing before reuse.

**IF INHALED:** Remove person to fresh air at once. If breathing has stopped, perform artificial respiration. If breathing is difficult, give oxygen. Keep the affected person warm and at rest. GET MEDICAL ATTENTION AS SOON AS POSSIBLE.

### **SECTION 5. FIRE-FIGHTING MEASURES**

**SUITABLE EXTINGUISHING MEDIA:** Fires involving small amounts of combustibles may be smothered with suitable dry chemical, soda ash, lime, sand or CO<sub>2</sub>. Use water on combustibles burning in vicinity of this material but use caution as water applied directly to this acid results in the evolution of heat and causes spattering.

**SPECIFIC HAZARDS:** Not flammable but highly reactive and capable of igniting finely divided combustible materials on contact. Reacts violently with water and organic materials with the evolution of heat. If involved in fire, sulfuric acid may release hazardous oxides of sulfur. Vapors are heavier than air and may accumulate in low areas. Containers exposed to extreme heat may rupture due to pressure buildup. Contact with common metals may generate hydrogen, which can form a flammable / explosive mixture with air. Fire may produce irritating, corrosive and/or toxic gases.

**SPECIAL FIREFIGHTING PROCEDURES:** Sulfuric acid is extremely slippery - use caution around spilled material. Emergency responders in the danger area should wear bunker gear and self-contained breathing apparatus for fires beyond the incipient stage. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8). Stop spill/release if it can be done with minimal risk. Move undamaged containers from danger area if it can be done with minimal risk.

### **SECTION 6. ACCIDENTAL RELEASE MEASURES**

**PERSONAL PRECAUTIONS:** Ventilate area. Stay upwind and away from spill release. Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section 8). Persons not wearing protective equipment and clothing should be restricted from areas of spills or leaks until cleanup has been completed.

**CONTAINMENT AND CLEAN-UP:** Avoid discharge into drains, water courses or onto the ground. Sulfuric acid should be absorbed in vermiculite, dry sand, earth, or a similar material. Collect spilled material in the most convenient and safe manner for disposal in a secured sanitary landfill. It may also be diluted and neutralized. Add acid slowly to a solution of soda ash and calcium hydroxide (slaked lime) or sodium bicarbonate (baking soda) or sodium carbonate (washing soda) with stirring.

### **SECTION 7. HANDLING AND STORAGE**

Store in original container. Always add acid to water, not the reverse. Avoid contact with skin and avoid breathing vapors. Do not eat, drink or smoke in the work area. Wash hands before eating, drinking or using the restroom. Do not place food or drinks in the area where splashing of the product is possible.

### **SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

<b>MATERIAL</b>	<b>OSHA PEL</b>	<b>ACGIH TLV</b>
Sulfuric acid	1 mg/m <sup>3</sup>	0.2 mg/m <sup>3</sup>

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## **SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION** (Continued)

**APPROPRIATE ENGINEERING CONTROLS:** General mechanical ventilation is typically sufficient, but supplemental local exhaust may be required to dispel fumes and vapors. Employees should be required to wear impervious clothing, gloves and face shields. Contact lenses should NOT be worn when working with this product.

## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

**APPEARANCE:** Colorless to dark brown clear liquid

**ODOR:** None

**SPECIFIC GRAVITY:** 1.67 - 1.84

## **SECTION 10. STABILITY AND REACTIVITY**

**REACTIVITY:** Reacts vigorously, violently or explosively with many organic and inorganic chemicals and with water.

**CHEMICAL STABILITY:** Hygroscopic (absorbs water from moist air)

**HAZARDOUS REACTIONS:** Contact with chlorine bleach generates toxic gas. Contact with metals produces explosive hydrogen gas.

**CONDITIONS TO AVOID:** Temperatures above 150°F.

**INCOMPATIBLE MATERIALS:** Water, organic materials, strong acids, strong bases, metals, alcohols, cyanides, sulfides

**HAZARDOUS DECOMPOSITION PRODUCTS:** Toxic gases and vapors

## **SECTION 11. TOXICOLOGICAL INFORMATION**

**ROUTE(S) OF ENTRY:** Inhalation, eyes, skin, ingestion.

### **Summary of Acute Health Hazards**

Concentrated sulfuric acid will effectively remove water from many organic materials. It is rapidly injurious to mucous membranes and exceedingly dangerous to the eyes.

**Ingestion:** Corrosive. Causes serious burns of the mouth or perforation of the esophagus or stomach. May be fatal if swallowed.

**Inhalation:** Corrosive and highly toxic. May be harmful or fatal if inhaled. May cause severe irritation and burns of the nose, throat and respiratory tract.

**Skin:** Corrosive. Splashes on the skin will cause severe skin burns. Burning and charring of the skin are a result of the great affinity for, and strong exothermic (heat generating) reaction with, water. Direct contact can be severely irritating to the skin and may result in redness, swelling, burns and severe skin damage.

**Eyes:** Corrosive. Direct contact with the liquid or exposure to vapors or mists may cause stinging, tearing, redness, swelling, corneal damage and irreversible eye damage. Splashes in the eyes will cause severe burns.

**Effects of Overexposure:** May cause severe irritation and burns of the mouth, nose, throat, respiratory and digestive tract, coughing, nausea, vomiting, abdominal pain, chest pain, pneumonitis, pulmonary edema, and perforation of the stomach. Overexposure to acid mists has been reported to cause erosion of tooth enamel.

**Note to Physicians:** Sulfuric acid is reported to cause pulmonary function impairment. Periodic surveillance is indicated. Sulfuric acid may cause acute lung damage. Surveillance of the lungs is indicated. Ingestion may cause gastroesophageal perforation. Perforation may occur within 72 hours, but, along with abscess formation, can occur weeks later. Long term complications may include esophageal, gastric or pyloric strictures or stenosis

**LISTED CARCINOGEN:** ACGIH: A2 - Suspected Human Carcinogen (Sulfuric acid contained in strong inorganic mists); NTP: Known carcinogen (listed as "Strong inorganic acid mists containing Sulfuric Acid"); IARC Monograph: Group 1 carcinogen (Sulfuric Acid); OSHA Regulated: Yes. **Warning:** This product contains Sulfuric Acid, listed as "Strong inorganic acid mists contain", a chemical known to the State of California to cause cancer.

Workers exposed to industrial sulfuric acid mist showed a statistical increase in laryngeal cancer.

**MEDICAL CONDITION AGGRAVATED:** Pre-existing skin disorders or respiratory disorders

## **SECTION 12. ECOLOGICAL INFORMATION**

Harmful to aquatic organisms. Avoid contaminating waterways. Sulfuric acid is soluble in water and remains indefinitely in the environment as sulfate. It does not bioaccumulate. It has high mobility in soil.

### **SECTION 13. DISPOSAL CONSIDERATIONS**

Sulfuric acid may be placed in sealed containers or absorbed in vermiculite, dry sand, earth or a similar material and disposed. Consult EPA, state and local hazardous waste regulations regarding disposal. Empty containers must be handled with care due to residue.

### **SECTION 14. TRANSPORTATION INFORMATION**

**D.O.T. PROPER SHIPPING NAME:** UN1830, Sulfuric acid, 8, PGII. Qualifies for Exception 173.154 (Limited Quantity) in inner packaging containing not over 1.0 liter.

### **SECTION 15. REGULATORY INFORMATION**

Section 302 Extremely Hazardous Substance, TPQ = 1000 lb

### **SECTION 16. OTHER INFORMATION**

**REVISION DATE :** Mar. 20, 2016

**HMIS:** Health = 3, Flammability = 0, Reactivity = 2, Personal Protection = X

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