

## MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA's Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

<b>IDENTITY AND MANUFACTURER'S INFORMATION</b>					
<b>NFPA Rating:</b> Health-3; Flammability-0; Reactivity-0; Special- COR		<b>HMIS Rating:</b> Health-3; Flammability-0; Reactivity-1; Personal Protection-C,D			
Manufactured For: <b>K&amp;K CHEMICAL CO.</b> Address: 1303 Industrial Drive Royse City, TX 75189		DOT Hazard Classification: <b>Identity (trade name as used on label) RAM-OUT (K-724)</b>			
Date Prepared: 07/20/99      Prepared By: ESIB		<b>MSDS Number:</b> R 990		Revision - 9	
Information Calls: (800)958-6921 <b>EMERGENCY RESPONSE NUMBER:</b> (800)424-9300 (Chemtrec)		NOTICE: JUDGMENT BASED ON INDIRECT TEST DATA			
<b>SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION</b>					
<b>COMPONENTS-CHEMICAL NAMES AND COMMON NAMES</b> (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)		CAS Number	SARA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)
SULFURIC ACID		7664-93-9	Yes	1mg/M3	1mg/M3
					d
<b>SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS</b>					
Boiling Point: 338°C	Specific Gravity: (H <sub>2</sub> O=1): 1.835				
Vapor Pressure: PSIG @ 70 F (Aerosols): N/A	Vapor Pressure: (Non-Aerosols) mm Hg and Temperature): 0.0038 mm/Hg at 20°C				
Vapor Density: (Air = 1): 3.38	Evaporation Rate: ( = 1): N/A				
Solubility in Water: Complete	Water Reactive: Violently				
Appearance and Odor: Colorless, clear to cloudy liquid with no odor to mild acrid odor.					
<b>SECTION 3 - FIRE AND EXPLOSION HAZARD DATA</b>					
FLAMMABILITY as per USA FLAME PROJECTION TEST (aerosols) N/A	Auto Ignition Temperature N/A		Flammability Limits in Air by % in Volume: % LEL: N/A    % UEL: N/A		
FLASH POINT AND METHOD USED (non-aerosols): None	SPECIAL FIRE FIGHTING PROCEDURES: Use NIOSH / MSHA approved positive pressure self-contained breathing apparatus when any material is involved in a fire. DO NOT allow water to enter containers. Violent reaction results.				
EXTINGUISHER MEDIA: CO <sub>2</sub> or dry chemical. Use water fog to knock down vapors.					
Unusual Fire & Explosion Hazards: Solutions in contact with metals form hydrogen.					
<b>SECTION 4 - REACTIVITY HAZARD DATA</b>					
STABILITY [X] STABLE [ ] UNSTABLE	HAZARDOUS POLYMERIZATION [ ] WILL [X] WILL NOT OCCUR				
Incompatibility (Mat. to avoid): Solvents, oxidizers, reducing agents, combustible materials, organic materials, alkalis, powdered metals, amines, carbides, fulminates, chlorates, nitrates, picrates.	Conditions to Avoid: Heating. Water on sulfuric acid will cause splattering, fuming and evolution of heat.				
Hazardous Decomposition Products: Oxides of sulfur. Hydrogen may be evolved in contact with metal.					
<b>SECTION 5 - HEALTH HAZARD DATA</b>					
PRIMARY ROUTES OF ENTRY: [X] INHALATION [ ] INGESTION [X] SKIN ABSORPTION [ ] EYE [ ] NOT HAZARDOUS					
ACUTE EFFECTS Burns, rapid destruction of all tissue contacted.					
Inhalation: May cause respiratory irritation. Liquid is corrosive.					
Eye Contact: Corrosive.	Skin Contact: Corrosive.				
Ingestion: Corrosive.					
CHRONIC EFFECTS: Dermatitis or secondary effects of burns, chronic over-exposure may cause tooth erosion, chronic cough.					
Medical Conditions Generally Aggravated by Exposure: N/A					
<b>EMERGENCY FIRST AID PROCEDURES</b>					
Eye Contact: Flush with water for 15 minutes. Seek medical attention.					
Skin Contact: Flush with water for 15 minutes. Seek medical attention.					
Inhalation: Remove victim to fresh air. Get medical attention.					
Ingestion: DO NOT INDUCE VOMITING. Drink large volumes of water. Get immediate medical attention.					
<b>SECTION 6 - CONTROL AND PROTECTIVE MEASURES</b>					
Respiratory Protection (specify type): Not needed in normal use and handling of product.					
Protective Gloves: Rubber	Eye Protection: Chemical goggles and faceshield.				
Ventilation Requirements: Normal room ventilation is usually adequate. As required to keep air concentration below PEL.					
Other Protective Clothing & Equipment: Coveralls, rubber apron and boots. Eyewash station and safety shower.					
Hygienic Work Practices: Avoid contact with liquid & breathing of mists or vapors. Upon contact with eyes or skin, wash off with water immediately.					
<b>SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE</b>					
Steps To Be Taken If Material Is Spilled Or Released: Dike spill & soak up with inert absorbent. Shovel or sweep & place in properly labeled approved DOT container & seal for disposal in authorized legal manner. Neutralize area with soda ash & dispose of material properly.					
Waste Disposal Methods: Dispose of material according to local, state or federal regulations.					
Precautions To Be Taken In Handling & Storage: Store in original shipping containers. Keep closed when not in use. Follow label directions when using. Shelf life one year.					
Other Precautions &/or Special Hazards: <b>KEEP OUT OF REACH OF CHILDREN.</b>					

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind

\*\* Chemical Listed as Carcinogen or Potential Carcinogen. [a] NTP [b] IARC Monograph [c] OSHA [d] Not Listed [e] Animal Data Only

## TECHNICAL DATA SHEET

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**Product Name:** RAM-OUT

**Item Number:** K-724

**Description:** This product is a Sulfuric Drain Opener that dissolves and liquefies hair, paper, grease, tobacco, tea bags and other organic obstructions. Always use face shield provided. Seller makes no warranty express or implied concerning this material or the use of this product other than indicated on this label. Buyer assumes all risk for use and/or handling of this material when such use and/or handling is contrary to label instructions.

**Directions:** When using this product, PROTECT FACE (especially eyes) by using full face shield or cup-type chemical goggles, AND OTHER PORTIONS OF BODY by using rubber gloves, rubber boots and rubber aprons. Use with adequate ventilation. After SLOWLY pouring acid into drain, IMMEDIATELY place inverted dish pan, bucket or other deep container over drain opening to protect against possible eruption of drain contents and acid. NEVER use a plunger while using this chemical. Use COLD WATER ONLY to flush after treatment. Repeat as necessary to maintain free-flowing drains. Do NOT use on aluminum. If the drain has a strainer, remove it if possible prior to use of this product. Do not allow this product to remain for more than a few minutes in contact with stainless steel or chrome, since discoloration is possible. Heat generated by this product may deform plastic pipes. Do NOT allow this product or its dilutions to contact surfaces of bathtubs and sinks. Do not attempt to supplement action of this product with air, gas or water pressure. Do not enter line after applying this product. Do not attempt to use mechanical drain line openers after this product has been added.

The following are **maximum dosage recommendations**, and should *not* be exceeded. Less product may be sufficient, depending on the kind of stoppage and material to be dissolved.

<b>Drain Size:</b>	<b>Product Amount/Time:</b>	<b>Flushing Recommendations:</b>
Small Drains:	8 oz./5 minutes	Flush for 2 to 3 minutes
3-4 Inch Drain:	1 quart/15 minutes	Flush for 5 minutes
6-8 Inch Drain:	1/2 gallon/15 minutes	Flush for 5 minutes
Septic Tanks:	1 gallon/500 gallon capacity	Pour into drain

**POISON!:** THIS IS CONCENTRATED SULFURIC ACID! READ ALL DIRECTIONS CAREFULLY BEFORE USING PRODUCT! Avoid contact with skin, eyes and clothing. THIS PRODUCT MAY ERUPT VIOLENTLY FROM DRAIN, spewing hot acid and contents of drain onto persons in vicinity causing severe burns, when poured into drain containing alkaline drain openers and/or hot water. Follow protective measure specified under DIRECTIONS. Do NOT use before or after other chemical drain openers or any other chemicals. Do NOT use in drains containing a build-up of plaster waste material. A toxic gas may be released. Use from this bottle only and do NOT transfer contents into any other container. NEVER add water to contents while in container because of violent reaction. Do NOT attempt to disassemble plumbing or remove clean-out plug(s) from lines containing this product. When flushing drain lines, use cold water; never use hot water. Never use a plunger when product is in drain lines. Keep container tightly closed when not in use. Do not allow to contact porcelain, enamel, aluminum, or chrome. Do not mix with other household chemicals. KEEP OUT OF REACH OF CHILDREN. **FIRST AID PROCEDURES:** **SKIN CONTACT:** Flush immediately with water for 15 minutes. Call physician immediately. **EYE CONTACT:** Flush immediately with water for 15 minutes. Call physician immediately. **INGESTION:** Do not induce vomiting. Drink large volumes of water or milk. Follow with milk of magnesia, beaten eggs or vegetable oil. Call physician immediately.

**CONTAINER DISPOSAL:** When container is completely empty, triple rinse with COLD WATER ONLY before discarding to prevent accidental burns. Puncture container and discard according to local regulations.

**CAS NUMBERS:** Sulfuric Acid 7664-93-9; Water 7732-18-5

**HMIS RATING:** Health-3; Flammability-0; Reactivity-0; Personal Protection-C,D.