

Date of Preparation: 3/09

Revision: 2

**Section 1 - Chemical Product and Company Identification**

**Product/Chemical Name:** KT 1231  
**Chemical Formula:** Mixture  
**CAS Number:** Mixture  
**Other Designations:** ALKYL SULFONIC ACID IN AROMATIC HYDROCARBON  
**General Use:** VARIOUS  
**Manufacturer:** KMCO, LP, 16503 Ramsey Road, Crosby, Texas, 77532, Phone (281) 328-3501, Fax (281) 328-9528

**24-HOUR EMERGENCY NUMBER: CHEMTREC 1-800-424-9300**

**Section 2 - Composition / Information on Hazardous Ingredients**

Ingredient Name	CAS Number	% wt <i>or</i> % vol
Diisopropyl naphthalene Sulfonic Acid	28757-00-8	35 - 70
Light Aromatic Solvent Naphtha	64742-95-6	25 - 60
1,2,4-Trimethylbenzene	95-63-6	5 - 15
Diisopropyl naphthalene	38640-62-9	1 - 10
Other Alkyl Aromatic Sulfonic Acids	Mixture	0 - 10
Sulfuric Acid	7664-93-9	0.5 - 5
Cumene	98-82-8	0 - 3
Xylene	1330-20-7	0 - 3
Benzene	71-43-2	<10 ppm

Ingredient	OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH IDLH
	TWA	STEL	TWA	STEL	TWA	STEL	
Diisopropyl naphthalene Sulfonic Acid	None estab.	None estab.	None estab.	None estab.	None estab.	None estab.	None estab.
Light Aromatic Solvent Naphtha	300 ppm	400 ppm	300 ppm	None estab.	None estab.	None estab.	None estab.
1,2,4-Trimethylbenzene	None estab.	None estab.	25 ppm	None estab.	25 ppm	None estab.	None estab.
Diisopropyl naphthalene	None estab.	None estab.	None estab.	None estab.	None estab.	None estab.	None estab.
Other Alkyl Aromatic Sulfonic Acids	None estab.	None estab.	None estab.	None estab.	None estab.	None estab.	None estab.
Sulfuric Acid	1 mg/m3	None estab.	1 mg/m3	3 mg/m3	1 mg/m3	None estab.	15 mg/m3
Cumene	50 ppm	None estab.	50 ppm	None estab.	50 ppm	None estab.	900 ppm
Xylenes	100 ppm	None estab.	100 ppm	150 ppm	100 ppm	150 ppm	None estab.
Benzene	1 ppm	5 ppm	0.5 ppm	2.5 ppm	0.1 ppm	1 ppm	500 ppm

**Section 3 - Hazards Identification**

☆☆☆☆☆ **Emergency Overview** ☆☆☆☆☆  
**DANGER!**  
 MAY BE CORROSIVE TO THE SKIN, EYES AND RESPIRATORY TRACT  
 ASPIRATION HAZARD IS SWALLOWED-CAN ENTER LUNGS AND CAUSE DAMAGE

HMIS	
H	3
F	2
R	1

MAY CAUSE CARDIAC SENSITIZATION  
 OVEREXPOSURE MAY CAUSE CNS DEPRESSION  
 MAY BE HARMFUL OR FATAL IF SWALLOWED OR INHALED  
 CANCER HAZARD  
 POTENTIAL REPRODUCTIVE HAZARD

### Potential Health Effects

#### Acute Effects

**Inhalation:** Extremely irritating and corrosive. May cause severe burns and tissue damage to the respiratory tract. Symptoms may include throat burns, constriction of the windpipe (bronchospasms), severe pulmonary edema and death. The severity of the symptoms depends on the concentration and duration of the exposure. May cause central nervous system (CNS) depression or effects. Symptoms may include headache, excitations, euphoria, dizziness, incoordination, drowsiness, light-headedness, blurred vision, fatigue, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death. The severity of the symptoms depends on the concentration and duration of exposure.

**Eye:** Corrosive. Exposure may cause severe burns, destruction of eye tissue, and possible permanent injury or blindness. Prolonged or repeated exposure may cause irritation, pain, conjunctivitis, and possible corneal damage.

**Skin:** Corrosive. Contact may cause reddening, itching, inflammation, burns, blistering, and possibly severe tissue damage. Repeated or prolonged contact may result in drying, reddening, itching, pain, inflammation, cracking and possible secondary infection with tissue damage.

**Ingestion:** Corrosive. May cause painful irritation and burning of the mouth and throat, painful swallowing, labored breathing, burns or perforation of the gastrointestinal tract leading to ulceration and secondary infection. Corrosive damage to the stomach and esophagus may be delayed. Aspiration into lungs may cause chemical pneumonia and lung damage.

**Carcinogenicity:** IARC had determined that there is sufficient evidence for the carcinogenicity of occupational exposure to strong inorganic acid mists containing sulfuric acid in humans (IARC Class 1).

**Medical Conditions Aggravated by Long-Term Exposure:** Pre-existing disorders of the kidney, liver, blood, skin, respiratory system, cardiovascular system, and nervous system may be aggravated by exposure to this product.

**Chronic Effects:** Repeated exposure to this material may cause bronchitis, laryngitis, cardiac sensitization, and damage to the peripheral nerves. Cardiac sensitization can result in arrhythmia (irregular heartbeat) and death due to cardiac arrest.

**Target Organs:** Acute or chronic overexposure to this material may cause system toxicity, including adverse effects to the kidney, liver, blood, adrenal gland, spleen, eyes, thymus, teeth, cardiovascular system, respiratory system, and nervous system.

SEE SECTION 11 FOR MORE DETAILED INFORMATION.

### Section 4 - First Aid Measures

**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.

**Eye Contact:** Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get immediate medical attention.

**Skin Contact:** Remove any contaminated clothing. Wash skin with soap and water for at least 15 minutes. Get immediate medical attention. Launder contaminated clothing before reuse. Discard contaminated leather goods.

**Ingestion:** Do not induce vomiting. If victim is conscious and alert, give 1 – 3 glasses of water to dilute stomach contents. Rinse mouth out with water. Get immediate medical attention.

**Note to Physicians:** This product is primarily an irritant and corrosive. Signs and symptoms of CNS depression, confusion, and convulsions should be considered in the assessment and treatment of victims of exposures. As a corrosive, give attention to potential complication of esophagus or stomach perforations if ingested. Use of emetics and lavage are contraindicated. Necrosis and associated inflammatory processes occur at about 48 hours, but may extend up to four days. Initial healing processes occur during the period 4 –14 days, but the esophageal wall is weakest during this period.

If spontaneous vomiting has occurred after ingestion, the patient should be monitored for difficult breathing, as adverse effects of aspiration into the lungs may be delayed up to 48 hours.

Hydrocarbons may sensitize the heart to epinephrine and other circulating catecholamines so that arrhythmias may occur. Careful consideration of this potential adverse effect should precede administration of epinephrine or other cardiac stimulants and the selection of bronchodilators.

Aspiration of low viscosity petroleum hydrocarbons may cause severe pneumonia (oil pneumonia). Vomiting should not be induced. In unconscious victims, use of an endotracheal tube should be considered, if gastric lavage is undertaken.

Anemia may require the usual supportive measures. Medical evaluation of acute overexposures should include hematological determinations until stable. In severe acute and chronic poisoning, both renal and hepatic damage may occur and should be anticipated in such cases. Respiratory and pulmonary problems may require special attention. After severe acute symptoms have been alleviated, it may be advisable to consider periodic monitoring of the patient until such time as the likelihood of other adverse effects can be discounted.

### Section 5 - Fire-Fighting Measures

**Flash Point:** 109°F (43 °C)

**Flash Point Method:** Tag Closed Cup

**Burning Rate:** Not Available

**Autoignition Temperature:** Not Available

**LEL:** Not Available

**UEL:** Not Available

**Flammability Classification:** Fire hazard when exposed to heat or flames.

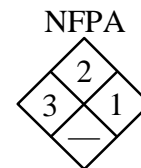
**Extinguishing Media:** Use dry chemical, alcohol foam, all purpose AFFF or carbon dioxide to extinguish fire. Do not use water.

**Unusual Fire or Explosion Hazards:** Vapors may form explosive mixture with air. Vapors can travel to a source of ignition and flash back. Explosion hazard if exposed to extreme heat or to physical or thermal shock.

**Hazardous Combustion Products:** During a fire, smoke may contain the original material in addition to unidentified toxic and/or irritating compounds. Hazardous combustion products may include, and are not limited to, carbon monoxide, carbon dioxide, SOx, and unidentified organic compounds.

**Fire-Fighting Instructions:** Keep people away. Isolate fire area and deny unnecessary entry. Do not use add water to acid. Acid can react with metals to liberate flammable hydrogen gas, especially when diluted with water. Fight fire from protected location or safe distance. Consider use of unmanned hose holder or monitor nozzles. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reingition has passed. Do not release runoff from fire control methods to sewers or waterways.

**Fire-Fighting Equipment:** Wear positive pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, pants, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.



### Section 6 - Accidental Release Measures

**Spill /Leak Procedures:** Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment, including positive pressure self-contained breathing apparatus (SCBA). Isolate hazard area for ½ mile in all directions if tank, rail car, or tank truck is involved in fire. Keep unnecessary and unprotected personnel from entering. Use non-sparking tools and equipment. Do not flush to sewer.

**Small Spills:** Contain and recover material when possible.

#### Large Spills

**Containment:** Wear respirator and protective clothing as appropriate. Do not release into sewers or waterways.

**Cleanup:** Contain and recover material when possible. Collect liquid in appropriate container. Absorb residue with an inert material. Consult with your environmental department for detailed clean up instructions.

**Regulatory Requirements:** Follow applicable OSHA regulations (29 CFR 1910.120).

### Section 7 - Handling and Storage

**Handling Precautions:** Containers, even those that have been emptied, can contain product or vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. No smoking, open flames or sources of ignition in handling and storage area. Electrically ground all equipment.

**Storage Requirements:** Store in a cool, well-ventilated place, away from direct sunlight. Avoid sources of ignition, such as static buildup, heat, sparks, or flame. Avoid contact with strong oxidizers. Keep containers tightly closed when not in use.

### Section 8 - Exposure Controls / Personal Protection

**Engineering Controls:** Controls should be such that adequate ventilation is provided.

**Ventilation:** Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

**Administrative Controls:** None.

**Respiratory Protection:** Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. For emergency or nonroutine operations (cleaning spills, reactor vessels, or storage tanks), wear an SCBA. *Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.* If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

**Protective Clothing/Equipment:** Wear chemically protective gloves, boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133). Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of contact lenses.

**Safety Stations:** Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

**Contaminated Equipment:** Separate contaminated work clothes from street clothes. Launder before reuse. Discard contaminated leather goods and clean personal protective equipment.

**Comments:** Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

### Section 9 - Physical and Chemical Properties

<b>Physical State:</b> Liquid	<b>Water Solubility:</b> Partially soluble
<b>Appearance and Odor:</b> Dark reddish -brown liquid with aromatic odor	<b>Other Solubilities:</b> Not determined
<b>Odor Threshold:</b> Not determined	<b>Boiling Point, 760 mmHg:</b> Not determined
<b>Vapor Pressure:</b> Not determined	<b>Freezing/Melting Point:</b> Not determined
<b>Vapor Density (Air=1):</b> >1	<b>Viscosity:</b> Not determined
<b>Formula Weight:</b> Mixture	<b>Refractive Index:</b> Not determined
<b>Density:</b>	<b>Surface Tension:</b> Not determined
<b>Specific Gravity:</b> 1.04	<b>% Volatile:</b> Not determined
<b>pH, 25% solution in water:</b> <1	<b>Evaporation Rate(BuAc=1):</b> Not determined

### Section 10 - Stability and Reactivity

**Stability:** KT 1231 is stable in closed containers under normal storage and handling conditions.

**Polymerization:** Hazardous polymerization will not occur.

**Chemical Incompatibilities:** Avoid contact with oxidizing materials.

**Conditions to Avoid:** Physical and thermal shock.

**Hazardous Decomposition Products:** Thermal oxidative decomposition of KT 1231 can produce carbon monoxide, carbon dioxide, SO<sub>x</sub>, and unidentified organic compounds.

## Section 11- Toxicological Information

## Toxicity Data: \*

Acute or chronic overexposure to this material or its components may cause system toxicity, including adverse effects to the kidneys, liver, adrenal gland, spleen, blood, eyes, thymus, teeth, nervous system, respiratory system, and cardiovascular systems.

Exposure to components of this material may cause the following specific symptoms, depending on the concentration and duration of exposure: anemia, hearing loss, limb paralysis (animal data), erosion of dental enamel. Components have been shown to be weak cardiac sensitizers which can result in cardiac arrhythmia and ventricular fibrillation.

Reports have associated repeated and prolonged occupation overexposure to solvents with permanent brain and nervous system damage.

Pregnant women may be at increased risk from exposure.

\* See NIOSH, RTECS for additional toxicity data.

**Acute Inhalation Effects:**

Human, inhalation, TC<sub>LO</sub>: Data not available

**Acute Oral Effects:**

Rat, oral, LD<sub>50</sub>: Data not available

**Chronic Effects:** may cause system toxicity

**Carcinogenicity:** IARC has determined that there is sufficient evidence for the carcinogenicity of occupational exposure to strong inorganic acid mists containing sulfuric acid in humans

**Mutagenicity:** May cause adverse reproductive effects

**Teratogenicity:** May cause adverse developmental effects

## Section 12 - Ecological Information

**Ecotoxicity:** Data not available.

**Environmental Fate:** Data not available.

**Environmental Degradation:** Data not available.

**Soil Absorption/Mobility:** Data not available.

## Section 13 - Disposal Considerations

**Disposal:** Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations. When disposed of, this material is a hazardous waste due to its ignitability, corrosivity, and benzene content.

**Disposal Regulatory Requirements:** Consult current Federal, state and local regulations.

**Container Cleaning and Disposal:** Dispose of container and unused contents in accordance with Federal, state and local requirements.

## Section 14 - Transport Information

## DOT Transportation Data (49 CFR 172.101):

**Shipping Name:** Corrosive Liquids, Flammable, N.O.S. (Solvent Naphtha, Diisopropyl naphthalene Sulfonic Acid)

**Hazard Class:** 8 (3)

**ID No.:** UN 2920

**Packing Group:** II

**Label:** Corrosive, Flammable Liquid, Marine Pollutant

**Special Provisions**

(172.102): B2,T15,T26

**Packaging Authorizations**

a) **Exceptions:** none

b) **Non-bulk Packaging:** 173.202

c) **Bulk Packaging:** 173.243

**Quantity Limitations**

a) **Passenger, Aircraft, or Railcar:** 1 L

b) **Cargo Aircraft Only:** 30 L

**Vessel Stowage Requirements**

a) **Vessel Stowage:** Location C

**Section 15 - Regulatory Information****EU REACH - NOT REGISTERED AND CANNOT BE EXPORTED INTO THE EU.****EPA Regulations:**

RCRA Hazardous Waste Number (40 CFR 261.33): U019 (benzene), U055 (cumene), U239 (xylene)

RCRA Hazardous Waste Classification (40 CFR 261):

CERCLA Hazardous Substance (40 CFR 302.4) listed specific per RCRA, Sec. 3001; CWA, Sec. 311 (b)(4);  
CWA, Sec. 307(a), CAA, Sec. 112CERCLA Reportable Quantity (RQ): Sulfuric Acid, 1000 pounds; Cumene, 5000 pounds; Xylene, 1000  
pounds, Benzene, 10 pounds

SARA 311/312 Codes: Immediate Hazard, Delayed Hazard, Fire Hazard

SARA Toxic Chemical (40 CFR 372.65): .

SARA EHS (Extremely Hazardous Substance) (40 CFR 355): Sulfuric Acid

**OSHA Regulations:**

Air Contaminant (29 CFR 1910.1000, Table Z-1, Z-1-A): benzene, cumene, xylene

**California Prop. 65:**

Proposition 65 requires manufacturers or distributors of consumer products into the State of California to provide a warning statement if the product contains ingredients for which the State has found to cause cancer, birth defects or other reproductive harm. If the product contains an ingredient listed by the State of California to cause cancer or reproductive toxicity it will be listed below: Benzene

**Section 16 - Other Information****Prepared By:** KMCO, LP**Revision Notes:** New Issue.**Additional Hazard Rating Systems:** None.**Disclaimer:** KMCO, LP believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. No warranty of fitness for any particular purpose, warranty of merchantability, or any other warranty expressed or implied, is made concerning the information provided herein. The information provided herein relates only to the specific product designated and may not be valid where such product is used in combination with any other materials or in any process. Further, since the conditions and methods of use of the product and of the information referred to herein are beyond the control of KMCO, LP. KMCO, LP expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information.

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