MATERIAL SAFETY DATA SHEET

IDENTITY: UNDYED KEROSENE 1 - K

CODE NO: 4136

SYNONYMS: Hydrodesulfurized Kerosene
CHEMICAL FORMULA: Complex Hydrocarbon Mixture
C.A.S. NUMBER: 64742-81-0
N.F.P.A. CODE: **HEALTH – 1** **FIRE – 2** **REACTIVITY – 0** **OTHER**

HAZARDOUS INGREDIENTS

	CONCENTRATION	OSHA PEL	ACGIH TLV	C.A.S. NO.
HYDRODESULFURIZED KEROSENE	BALANCE	-	-	64742-81-0
SULFUR	< 0.04 wt %	-	-	7704-34-9
ETHYLBENZENE	0.17 wt %	100 PPM	100 PPM	100-41-4
CUMENE	0.07 wt %	50 PPM	50 PPM	98-82-8
XYLENE	1.17 wt %	100 PPM	100 PPM	1330-20-7
1,2,4-TRIMETHYLBENZENE	1.54 wt %	25 PPM	25 PPM	95-63-6
TOLUENE	0.05 wt %	100 PPM	100 PPM	108-88-3

PHYSICAL AND CHEMICAL PROPERTIES

BOILING RANGE (°F): 322 – 572 (Typical)
VAPOR PRESSURE (psia): Not determined
VAPOR DENSITY (Air = 1): Not determined
SOLUBILITY IN WATER: Negligible
APPEARANCE AND ODOR: Water white liquid with typical hydrocarbon odor

API GRAVITY: 37.0 – 51.0
SPECIFIC GRAVITY (H_2O = 1):
EVAP. RATE (Butyl Acetate = 1): Not determined

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method Used):
> 100 °**F** (TCC)

FLAMMABLE LIMITS: **LEL** **UEL**
(BASED ON KEROSENE) 0.7 5.0

EXTINGUISHING MEDIA:
Use water spray, dry chemical, foam or carbon dioxide. Use water spray or fog; do not use straight streams.

SPECIAL FIRE FIGHTING PROCEDURES:
Use water to keep fire-exposed containers cool.

UNUSUAL FIRE AND EXPLOSIVE HAZARDS:
Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to a source of ignition and flash back. Vapors are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapor explosion hazard indoors, outdoors or in sewers. Runoff to sewer may create fire or explosion hazard. Containers may explode when heated. Liquid is lighter than water.

REACTIVITY DATA

STABILITY:

Stable

HAZARDOUS DECOMPOSITION OR COMBUSTION PRODUCTS:

Burning can produce carbon monoxide and carbon dioxide. Carbon monoxide is highly toxic if inhaled (200 ppm OSHA Ceiling). Carbon dioxide in sufficient quantities can act as an asphyxiant. When heated to decomposition it emits acrid smoke and irritating fumes.

INCOMPATIBILITY (Materials/ Conditions to Avoid):

A very dangerous fire and explosion hazard when exposed to heat or flame; can react vigorously with oxidizing materials.

HAZARDOUS POLYMERIZATION:

Will not occur

HEALTH HAZARD DATA

SIGNS AND SYMPTOMS OF EXPOSURE:

Inhalation or contact with material may irritate or burn skin and eyes. Fire may produce irritating, corrosive and/or toxic gases. Vapors may cause dizziness or suffocation. Runoff from fire control or dilution water may cause pollution.

HYDRODESULFURIZED KEROSENE: (CAS: 64742-81-0) Low toxicity by ingestion, inhalation and skin contact. A skin irritant.

SULFUR: (CAS: 7704-34-9) Poison by ingestion, intravenous and intraperitoneal routes. A human eye irritant. A fungicide. Chronic inhalation can cause irritation of mucous membranes.

ETHYLBENZENE: (CAS: 100-41-4) Moderately toxic by ingestion and intraperitoneal route. Mildly toxic by inhalation and skin contact. An experimental teratogen. Other experimental reproductive effects. Human systemic effects by inhalation: eye, sleep and pulmonary changes. An eye and skin irritant. Human mutation data reported. The liquid is an irritant to the skin and mucous membranes. A concentration of 0.1% of the vapor in air is an irritant to human eyes, and a concentration of 0.2% is extremely irritating at first, then causes dizziness, irritation of the nose and throat and a sense of constriction in the chest. Exposure of guinea pigs to 1% concentration has been reported as causing ataxia, loss of consciousness, tremor of the extremities and finally death through respiratory failure. The pathological findings were congestion of the brain and lungs with edema.

CUMENE: (CAS: 98-82-8) Moderately toxic by ingestion. Mildly toxic by inhalation and skin contact. Human systemic effects by inhalation: an antipsychotic, unspecified changes in the sense of smell and respiratory system. An eye and skin irritant. Potential narcotic action. Central nervous system depressant.

1,2,4-TRIMETHYLBENZENE: (CAS: 95-63-6) Moderately toxic by intraperitoneal route. Mildly toxic by inhalation. Can cause central nervous system depression, anemia, bronchitis.

XYLENE: (CAS: 1330-20-7) Moderately toxic by intraperitoneal and subcutaneous routes. Mildly toxic by ingestion and inhalation. An experimental teratogen. Human systemic effects by inhalation: olfactory changes, conjunctiva irritation and pulmonary changes. Experimental reproductive effects. Mutation data reported. A human eye irritant. An experimental skin and severe eye irritant. Some temporary corneal effects are noted, as well as some conjunctival irritation by instillation (adding drops to the eyes one at a time). Irritation can start at 200 ppm.

HEALTH HAZARD DATA (CONTINUED)

TOLUENE: (CAS: 108-88-3) Poison by intraperitoneal route. Moderately toxic by intravenous and subcutaneous routes. Mildly toxic by inhalation. An experimental teratogen. Human systemic effects by inhalation: CNS recording changes, hallucinations or distorted perceptions, motor activity changes, antipsychotic, psychophysiological test changes and bone marrow changes. Experimental reproductive effects. Mutation data reported. A human eye irritant. An experimental skin and severe eye irritant. Inhalation of 200 ppm of toluene for 8 hours may cause impairment of coordination and reaction time; with higher concentrations (up to 800 ppm) these effects are increased and are observed in a shorter time. In the few cases of acute toluene poisoning reported, the effect has been that of a narcotic, the workman passing through a stage of intoxication into one of coma. Recovery following removal from exposure has been the rule. An occasional report of chronic poisoning describes an anemia and leucopenia, with biopsy showing a bone marrow hypoplasia. These effects, however, are less common in people working with toluene, and they are not as severe. At 200-500 ppm, headache, nausea, eye irritation, loss of appetite, a bad taste, lassitude, impairment of coordination and reaction time are reported, but are not usually accompanied by any laboratory or physical findings of significance. With higher concentrations, the above complaints are increased and in addition, anemia, leukopenia, and enlarged liver may be found in rare cases.

CARCINOGENICITY:

The following components are considered to be carcinogenic by the National Toxicology Program, the International Agency for Research on Cancer, and/or the Occupational Safety and Health Administration:

NONE

EMERGENCY AND FIRST AID PROCEDURES

Get medical attention. Keep victim warm and quiet. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

INHALATION:

Move victim to fresh air and call emergency medical care. Apply artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult.

SKIN CONTACT:

Immediately flush skin with running water for at least 20 minutes. Wash skin with soap and water. Remove and isolate contaminated clothing and shoes at the site.

EYE CONTACT:

Immediately flush eyes with running water for at least 20 minutes. Get medical attention.

INGESTION:

Do not give anything by mouth to an unconscious victim. Do not induce vomiting. Get medical attention.

PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN WHEN MATERIAL SPILLS OR LEAKS:

Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand or other noncombustible material and transfer to containers. Use clean non-sparking tools to collect absorbed material. For large spills, dike far ahead of liquid spill for later disposal. Water spray may reduce vapor; but may not prevent ignition in closed spaces.

WASTE DISPOSAL METHOD:

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State and Local regulations.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:

Do not use or handle near ignition sources. Provide adequate ventilation.

CONTROL MEASURES

RESPIRATORY PROTECTION:

NIOSH approved breathing protection.

VENTILATION:

Recommended. Use explosion-proof type.

PROTECTION GLOVES:

Nitrile, Neoprene.

EYE PROTECTION:

Face shield or safety glasses.

OTHER PROTECTION:

Avoid breathing vapors, skin contact or ingestion.

REGULATORY INFORMATION

SARA TITLE III - SECTIONS 302 / 304:

		SEC 302	SEC 304	
COMPONENT NAME	**CAS NO.**	**EHS TPQ**	**EHS RQ**	**CERCLA RQ**
ETHYLBENZENE	100-41-4			1000
CUMENE	98-82-8			5000
XYLENE	1330-20-7			100
TOLUENE	108-88-3			1000

SARA TITLE III - SECTIONS 311 / 312:

IMMEDIATE: Yes
CHRONIC: Yes
FIRE: Yes
SUDDEN RELEASE OF PRESSURE: No
REACTIVE: No

REGULATORY INFORMATION (CONTINUED)

SARA TITLE III - SECTION 313:

COMPONENT NAME	CAS NO.	CONCENTRATION
ETHYLBENZENE	100-41-4	0.17 %
CUMENE	98-82-8	0.07 %
XYLENE	1330-20-7	1.17 %
1,2,4-TRIMETHYLBENZENE	95-63-6	1.54 %
TOLUENE	108-88-3	0.05 %

RESOURCE INFORMATION

EMERGENCY RESPONSE GUIDEBOOK - 2000 EDITION
SAX'S DANGEROUS PROPERTIES OF INDUSTRIAL CHEMICALS - 10th EDITION
EPA TITLE III LIST OF LISTS - NOVEMBER 1998 EDITION

CONTACT INFORMATION

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