



MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name: KEROSENE 1-K UNDYED

Manufacturer Information:

Sunoco, Inc. (R&M)
Ten Penn Center
1801 Market Street
Philadelphia, Pennsylvania, 19103-1699

Product Use:

Emergency Phone Numbers:

Chemtrec (800) 424-9300
Sunoco Inc. (800) 964-8861

Information:

Product Safety Information (610) 859-1120

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No.	Amount (Vol%)
HYDRODESULFURIZED KEROSENE	64742-81-0	99 - 100
NAPHTHALENE	91-20-3	0 - 3
XYLENE	1330-20-7	0 - 0.9
TOLUENE	108-88-3	0 - 0.3
ETHYL BENZENE	100-41-4	0 - 0.2
N-HEXANE	110-54-3	0 - 0.1
BENZENE	71-43-2	0 - 0.07
CUMENE	98-82-8	0 - 0.07
PROPRIETARY ADDITIVES		0 - 0.01

EXPOSURE GUIDELINES (SEE SECTION 15 FOR ADDITIONAL EXPOSURE LIMITS)

	CAS No.	Governing Body	Exposure Limits		
BENZENE	71-43-2	ACGIH	STEL	2.5	ppm
BENZENE	71-43-2	OSHA	STEL	5	ppm
BENZENE	71-43-2	ACGIH	TWA	0.5	ppm
BENZENE	71-43-2	OSHA	TWA	1	ppm
CUMENE	98-82-8	ACGIH	TWA	50	ppm
CUMENE	98-82-8	OSHA	TWA	50	ppm
ETHYL BENZENE	100-41-4	ACGIH	STEL	125	ppm
ETHYL BENZENE	100-41-4	ACGIH	TWA	100	ppm
ETHYL BENZENE	100-41-4	OSHA	TWA	100	ppm
N-HEXANE	110-54-3	ACGIH	TWA	50	ppm
N-HEXANE	110-54-3	OSHA	TWA	500	ppm

NAPHTHALENE	91-20-3	ACGIH	STEL	15	ppm
NAPHTHALENE	91-20-3	ACGIH	TWA	10	ppm
NAPHTHALENE	91-20-3	OSHA	TWA	10	ppm
TOLUENE	108-88-3	OSHA	C	300	ppm
TOLUENE	108-88-3	NIOSH	STEL	150	ppm
TOLUENE	108-88-3	ACGIH	TWA	50	ppm
TOLUENE	108-88-3	OSHA	TWA	200	ppm
XYLENE	1330-20-7	ACGIH	STEL	150	ppm
XYLENE	1330-20-7	ACGIH	TWA	100	ppm
XYLENE	1330-20-7	OSHA	TWA	100	ppm
HYDRODESULFURIZED KEROSENE	64742-81-0	Sunoco	TWA	100	ppm

3. HAZARDS IDENTIFICATION

- EMERGENCY OVERVIEW**

Danger! Combustible. Harmful if inhaled. High vapor concentrations may cause drowsiness. May cause skin irritation. Harmful or fatal if swallowed. Pulmonary aspiration hazard. After ingestion, may enter lungs and produce damage. Contains material or materials that may cause cancer based on animal data.

Hazards Ratings:

Key: 0 = least, 1 = slight, 2 = moderate, 3 = high, 4 = extreme

	<u>Health</u>	<u>Fire</u>	<u>Reactivity</u>	<u>PPI</u>
NFPA	0	2		
HMIS	0	2	0	X

- POTENTIAL HEALTH EFFECTS**

- § **PRE-EXISTING MEDICAL CONDITIONS**

The following diseases or disorders may be aggravated by exposure to this product: Skin; Eye; Nervous system, Respiratory system; Lung (asthma-like conditions);

- § **INHALATION**

Can cause severe central nervous system depression (including unconsciousness). High vapor concentrations are irritating to the eyes, nose, throat, and lungs. May cause headaches and dizziness.

LC50 (mg/l): no data

LC50 (mg/m3): no data

LC50 (ppm): no data

- § **SKIN**

Practically non-toxic if absorbed through the skin. Contains a material that has caused skin tumors in laboratory animals. Moderately irritating to the skin.

Draize Skin Score: no data Out of 8.0

LD50 (mg/kg): no data

- § **EYES**

Substance causes slight eye irritation.

- § **INGESTION**

Product may be harmful or fatal if swallowed. Pulmonary aspiration hazard. After ingestion, may enter lungs and produce damage.

LD50 (g/kg): no data

4. FIRST AID MEASURES

- **INHALATION**
Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and continue to monitor. Get immediate medical attention.
- **SKIN**
Remove contaminated clothing. Wash skin with soap and water. Get medical attention. Wash clothing before reuse.
- **EYES**
Flush eye with water for 15 minutes. Get medical attention.
- **INGESTION**
Do not induce vomiting! Do not give liquids! Get medical attention immediately.

5. FIRE FIGHTING MEASURES

- **EXTINGUISHING MEDIA**
Water spray; Regular foam; Dry chemical; Carbon dioxide;
- **FIRE FIGHTING INSTRUCTIONS**
Use water spray to cool fire exposed tanks and containers. Wear structural fire fighting gear.

FLAMMABLE PROPERTIES

	Typical	Minimum	Maximum	Text Result	Units	Method
Flash Point				125 MINIMUM TCC	F	N/A
Autoignition Temperature				444 ESTIMATED	F	N/A
Lower Explosion Limit	0.7				%	N/A
Upper Explosion Limit	5				%	N/A

6. ACCIDENTAL RELEASE MEASURES

Prevent ignition, stop leak and ventilate the area. Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Use appropriate personal protective equipment as stated in Section 8 of this MSDS. Advise the Environmental Protection Agency (EPA) and appropriate state agencies, if required. Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Vacuum or sweep up material and place in a disposal container.

7. HANDLING AND STORAGE

- **HANDLING**
Use only in a well-ventilated area. Ground and bond containers when transferring material. Avoid breathing (dust, vapor, mist, gas). Avoid prolonged or repeated contact with skin. Avoid contact with eyes. Wash thoroughly after handling. Never siphon by mouth.
- **STORAGE**
Keep away from heat, sparks, and flame. Keep container closed when not in use. NFPA class II storage. Flash point is greater than 100 degrees F and less than 140 degrees F.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Consult With a Health and Safety Professional for Specific Selections

- **ENGINEERING CONTROLS**
Use with adequate ventilation. Mechanical ventilation recommended. Good general ventilation should be sufficient to control airborne levels.
- **PERSONAL PROTECTION**

§ **EYE PROTECTION**

Splash proof chemical goggles are recommended to protect against the splash of product.

§ **GLOVES or HAND PROTECTION**

The glove(s) listed below may provide protection against permeation. Gloves of other chemically resistant materials may not provide adequate protection. Protective gloves are recommended to protect against contact with product. Polyvinyl chloride (PVC); Neoprene; Nitrile; Polyvinyl alcohol; Viton;

§ **RESPIRATORY PROTECTION**

Concentration in air determines the level of respiratory protection needed. Use only NIOSH certified respiratory equipment. Half-mask air purifying respirator with organic vapor cartridges is acceptable for exposures to ten (10) times the exposure limit. Full-face air purifying respirator with organic vapor cartridges is acceptable for exposures to fifty (50) times the exposure limit. Exposure should not exceed the cartridge limit of 1000 ppm. Protection by air purifying respirators is limited. Use a positive pressure-demand full-face supplied air respirator or SCBA for exposures greater than fifty (50) times the exposure limit. If exposure is above the IDLH (Immediately Dangerous to Life and Health) or there is the possibility of an uncontrolled release, or exposure levels are unknown, then use a positive pressure-demand full-face supplied air respirator with escape bottle or SCBA. Wear a NIOSH-approved (or equivalent) full-facepiece airline respirator in the positive pressure mode with emergency escape provisions.

§ **OTHER**

Where splashing is possible, full chemically resistant protective clothing (e.g., acid suit) and boots are required. The following materials are acceptable for use as protective clothing: Polyvinyl alcohol (PVA); Polyvinyl chloride (PVC); Neoprene; Nitrile; Viton; Polyurethane; Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Remove contaminated clothing and wash before reuse. For non-fire emergencies, positive pressure SCBA and structural firefighter's protective clothing will provide only limited protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Property	Typical	Units	Text Result	Reference
Appearance		N/A	CLEAR OR RED LIQUID	
Boiling Point		F	325 TO 572	
Bulk Density		lb/gal	no data	
Melting Point		F	no data	
Molecular Weight		g/mole	no data	
Octanol/Water Coefficient		N/A	no data	
pH		N/A	no data	
Specific Gravity	0.81	N/A		
Solubility In Water		wt %	NIL	
Odor		N/A	KEROSENE ODOR.	
Odor Threshold	0.1	ppm		
Vapor Pressure		mmHg	20 @ 158F	@ 70 C
Viscosity (F)		SUS	no data	
Viscosity (C)	1.9	CsT		@ 40 C
% Volatile	100	wt %		

10. STABILITY AND REACTIVITY

- **STABILITY**
Stable

- **CONDITIONS TO AVOID**
Avoid heat, sparks and open flame.
- **INCOMPATIBILITY**
Strong oxidizers
- **HAZARDOUS DECOMPOSITION PRODUCTS**
Combustion may produce carbon monoxide, carbon dioxide and other asphyxiants.
- **HAZARDOUS POLYMERIZATION**
Will not polymerize.

11. ECOLOGICAL INFORMATION

No data available

12. DISPOSAL CONSIDERATIONS

Follow federal, state and local regulations. This material is a RCRA hazardous waste. Do not flush material to drain or storm sewer. Contract to authorized disposal service.

13. TRANSPORT INFORMATION

<u>Governing Body</u>	<u>Mode</u>	<u>Proper Shipping Name</u>
DOT	Ground	Kerosene

<u>Governing Body</u>	<u>Mode</u>	<u>Hazard Class</u>	<u>UN/NA No.</u>	<u>Label</u>
DOT	Ground	3 (Flammable liquid)	1223	

14. REGULATORY INFORMATION

<u>Regulatory List</u>	<u>Component</u>	<u>CAS No.</u>
ACGIH 2000 - Short Term Exposure Limits	BENZENE	71-43-2
ACGIH 2000 - Short Term Exposure Limits	ETHYL BENZENE	100-41-4
ACGIH 2000 - Short Term Exposure Limits	NAPHTHALENE	91-20-3
ACGIH 2000 - Short Term Exposure Limits	XYLENE	1330-20-7
ACGIH 2000 - Skin Absorption Designation	BENZENE	71-43-2
ACGIH 2000 - Skin Absorption Designation	N-HEXANE	110-54-3
ACGIH 2000 - Skin Absorption Designation	NAPHTHALENE	91-20-3
ACGIH 2000 - Skin Absorption Designation	TOLUENE	108-88-3
ACGIH 2000 - Time Weighted Averages	BENZENE	71-43-2
ACGIH 2000 - Time Weighted Averages	CUMENE	98-82-8
ACGIH 2000 - Time Weighted Averages	ETHYL BENZENE	100-41-4
ACGIH 2000 - Time Weighted Averages	N-HEXANE	110-54-3
ACGIH 2000 - Time Weighted Averages	NAPHTHALENE	91-20-3
ACGIH 2000 - Time Weighted Averages	TOLUENE	108-88-3
ACGIH 2000 - Time Weighted Averages	XYLENE	1330-20-7
CAA - 1990 Hazardous Air Pollutants	BENZENE	71-43-2
CAA - 1990 Hazardous Air Pollutants	CUMENE	98-82-8
CAA - 1990 Hazardous Air Pollutants	ETHYL BENZENE	100-41-4
CAA - 1990 Hazardous Air Pollutants	N-HEXANE	110-54-3
CAA - 1990 Hazardous Air Pollutants	NAPHTHALENE	91-20-3
CAA - 1990 Hazardous Air Pollutants	TOLUENE	108-88-3
CAA - 1990 Hazardous Air Pollutants	XYLENE	1330-20-7
California - Prop. 65 - Cancer list	BENZENE	71-43-2
California - Prop. 65 - Cancer list	NAPHTHALENE	91-20-3
California - Prop. 65 - Developmental Toxicity	BENZENE	71-43-2
California - Prop. 65 - Developmental Toxicity	TOLUENE	108-88-3
Canada - WHMIS: Ingredient Disclosure	BENZENE	71-43-2

Canada - WHMIS: Ingredient Disclosure	CUMENE	98-82-8
Canada - WHMIS: Ingredient Disclosure	ETHYL BENZENE	100-41-4
Canada - WHMIS: Ingredient Disclosure	N-HEXANE	110-54-3
Canada - WHMIS: Ingredient Disclosure	NAPHTHALENE	91-20-3
Canada - WHMIS: Ingredient Disclosure	TOLUENE	108-88-3
CERCLA/SARA - Haz Substances and their RQs	BENZENE	71-43-2
CERCLA/SARA - Haz Substances and their RQs	CUMENE	98-82-8
CERCLA/SARA - Haz Substances and their RQs	ETHYL BENZENE	100-41-4
CERCLA/SARA - Haz Substances and their RQs	N-HEXANE	110-54-3
CERCLA/SARA - Haz Substances and their RQs	NAPHTHALENE	91-20-3
CERCLA/SARA - Haz Substances and their RQs	TOLUENE	108-88-3
CERCLA/SARA - Haz Substances and their RQs	XYLENE	1330-20-7
CERCLA/SARA - Section 313 - Emission Reporting	BENZENE	71-43-2
CERCLA/SARA - Section 313 - Emission Reporting	CUMENE	98-82-8
CERCLA/SARA - Section 313 - Emission Reporting	ETHYL BENZENE	100-41-4
CERCLA/SARA - Section 313 - Emission Reporting	N-HEXANE	110-54-3
CERCLA/SARA - Section 313 - Emission Reporting	NAPHTHALENE	91-20-3
CERCLA/SARA - Section 313 - Emission Reporting	TOLUENE	108-88-3
CERCLA/SARA - Section 313 - Emission Reporting	XYLENE	1330-20-7
IARC - Group 1 (carcinogenic to humans)	BENZENE	71-43-2
IARC - Group 2B (Possibly carcinogenic to humans)	ETHYL BENZENE	100-41-4
Inventory - Canada - Domestic Substances List	BENZENE	71-43-2
Inventory - Canada - Domestic Substances List	CUMENE	98-82-8
Inventory - Canada - Domestic Substances List	ETHYL BENZENE	100-41-4
Inventory - Canada - Domestic Substances List	HYDRODESULFURIZED	64742-81-0
	KEROSENE	
Inventory - Canada - Domestic Substances List	N-HEXANE	110-54-3
Inventory - Canada - Domestic Substances List	NAPHTHALENE	91-20-3
Inventory - Canada - Domestic Substances List	TOLUENE	108-88-3
Inventory - Canada - Domestic Substances List	XYLENE	1330-20-7
Inventory - European EINECS Inventory	BENZENE	71-43-2
Inventory - European EINECS Inventory	CUMENE	98-82-8
Inventory - European EINECS Inventory	ETHYL BENZENE	100-41-4
Inventory - European EINECS Inventory	HYDRODESULFURIZED	64742-81-0
	KEROSENE	
Inventory - European EINECS Inventory	N-HEXANE	110-54-3
Inventory - European EINECS Inventory	NAPHTHALENE	91-20-3
Inventory - European EINECS Inventory	TOLUENE	108-88-3
Inventory - European EINECS Inventory	XYLENE	1330-20-7
Inventory - Japan - (ENCS)	BENZENE	71-43-2
Inventory - Japan - (ENCS)	CUMENE	98-82-8
Inventory - Japan - (ENCS)	ETHYL BENZENE	100-41-4
Inventory - Japan - (ENCS)	N-HEXANE	110-54-3
Inventory - Japan - (ENCS)	NAPHTHALENE	91-20-3
Inventory - Japan - (ENCS)	TOLUENE	108-88-3
Inventory - Japan - (ENCS)	XYLENE	1330-20-7
Inventory - Korea - Existing and Evaluated	BENZENE	71-43-2
Inventory - Korea - Existing and Evaluated	CUMENE	98-82-8
Inventory - Korea - Existing and Evaluated	ETHYL BENZENE	100-41-4
Inventory - Korea - Existing and Evaluated	HYDRODESULFURIZED	64742-81-0
	KEROSENE	
Inventory - Korea - Existing and Evaluated	N-HEXANE	110-54-3
Inventory - Korea - Existing and Evaluated	NAPHTHALENE	91-20-3
Inventory - Korea - Existing and Evaluated	TOLUENE	108-88-3
Inventory - Korea - Existing and Evaluated	XYLENE	1330-20-7
Inventory - TSCA - Sect. 8(b) Inventory	BENZENE	71-43-2
Inventory - TSCA - Sect. 8(b) Inventory	CUMENE	98-82-8
Inventory - TSCA - Sect. 8(b) Inventory	ETHYL BENZENE	100-41-4
Inventory - TSCA - Sect. 8(b) Inventory	HYDRODESULFURIZED	64742-81-0
	KEROSENE	
Inventory - TSCA - Sect. 8(b) Inventory	N-HEXANE	110-54-3
Inventory - TSCA - Sect. 8(b) Inventory	NAPHTHALENE	91-20-3

Inventory - TSCA - Sect. 8(b) Inventory	TOLUENE	108-88-3
Inventory - TSCA - Sect. 8(b) Inventory	XYLENE	1330-20-7
Massachusetts Right To Know List	BENZENE	71-43-2
Massachusetts Right To Know List	CUMENE	98-82-8
Massachusetts Right To Know List	ETHYL BENZENE	100-41-4
Massachusetts Right To Know List	N-HEXANE	110-54-3
Massachusetts Right To Know List	NAPHTHALENE	91-20-3
Massachusetts Right To Know List	TOLUENE	108-88-3
Massachusetts Right To Know List	XYLENE	1330-20-7
New Jersey - Department of Health RTK List	BENZENE	71-43-2
New Jersey - Department of Health RTK List	CUMENE	98-82-8
New Jersey - Department of Health RTK List	ETHYL BENZENE	100-41-4
New Jersey - Department of Health RTK List	N-HEXANE	110-54-3
New Jersey - Department of Health RTK List	NAPHTHALENE	91-20-3
New Jersey - Department of Health RTK List	TOLUENE	108-88-3
New Jersey - Department of Health RTK List	XYLENE	1330-20-7
New Jersey - Special Hazardous Substances	BENZENE	71-43-2
New Jersey - Special Hazardous Substances	CUMENE	98-82-8
New Jersey - Special Hazardous Substances	ETHYL BENZENE	100-41-4
New Jersey - Special Hazardous Substances	N-HEXANE	110-54-3
New Jersey - Special Hazardous Substances	TOLUENE	108-88-3
New Jersey - Special Hazardous Substances	XYLENE	1330-20-7
NJ Environmental Hazardous Substances List	BENZENE	71-43-2
NJ Environmental Hazardous Substances List	CUMENE	98-82-8
NJ Environmental Hazardous Substances List	ETHYL BENZENE	100-41-4
NJ Environmental Hazardous Substances List	N-HEXANE	110-54-3
NJ Environmental Hazardous Substances List	NAPHTHALENE	91-20-3
NJ Environmental Hazardous Substances List	TOLUENE	108-88-3
NJ Environmental Hazardous Substances List	XYLENE	1330-20-7
NTP Ninth Report - Known Carcinogens	BENZENE	71-43-2
OSHA - Final PELs - Ceiling Limits	BENZENE	71-43-2
OSHA - Final PELs - Ceiling Limits	TOLUENE	108-88-3
OSHA - Final PELs - Time Weighted Averages	BENZENE	71-43-2
OSHA - Final PELs - Time Weighted Averages	CUMENE	98-82-8
OSHA - Final PELs - Time Weighted Averages	ETHYL BENZENE	100-41-4
OSHA - Final PELs - Time Weighted Averages	N-HEXANE	110-54-3
OSHA - Final PELs - Time Weighted Averages	NAPHTHALENE	91-20-3
OSHA - Final PELs - Time Weighted Averages	TOLUENE	108-88-3
OSHA - Final PELs - Time Weighted Averages	XYLENE	1330-20-7
Pennsylvania Right to Know List	BENZENE	71-43-2
Pennsylvania Right to Know List	CUMENE	98-82-8
Pennsylvania Right to Know List	ETHYL BENZENE	100-41-4
Pennsylvania Right to Know List	N-HEXANE	110-54-3
Pennsylvania Right to Know List	NAPHTHALENE	91-20-3
Pennsylvania Right to Know List	TOLUENE	108-88-3
Pennsylvania Right to Know List	XYLENE	1330-20-7
TSCA - Sect. 12(b) - Export Notification	N-HEXANE	110-54-3

Title III Classifications Sections 311,312:

- Acute: **YES**
- Chronic: **YES**
- Fire: **YES**
- Reactivity: **NO**
- Sudden Release of Pressure: **NO**

15. OTHER INFORMATION

COMPONENT TOXICITY: Overexposure to naphthalene, a minor component of this product, may cause skin, eye and respiratory tract irritation, anemia, loss of vision, nervous system effects and kidney and thymus damage. Also, exposure to naphthalene has produced "respiratory tract" tumors in laboratory animals..