

GOODWAY REFINING, LLC

Safety Data Sheet

*** 1. Product and Company Identification ***

Material Name: Kerosene K-1 (400ppm sulfur max)

Synonyms: K-1; Stoddard solvent; Kerosine

Recommended Use: Heating oil; Solvent; Cooking fuel; Lighting fuel; Jet fuel; Rocket fuel

Supplier: Goodway Refining, LLC
4745 Ross Rd.
Atmore, AL 36502
251-294-5660

Emergency Telephone #: CHEMTREC 800-424-9300
Goodway 251-294-5660

*** 2. Hazards Identification ***

GHS Classification:

Flammable Liquids – Category 3
Skin Corrosion/Irritation – Category 2
Carcinogenicity – Category 2
Aquatic Toxicity – Category 2
Specific Target Organ Toxicity – Category 3
(respiratory irritation, narcosis)

GHS Label Elements**Symbol(s):****Signal Word(s):**

Danger

Hazard Statements:

Flammable liquid and vapor.
May be fatal if swallowed and/or enters airway.
May cause drowsiness or dizziness.
Causes skin, respiratory, and eye irritation.
Toxic to aquatic life.

Precautionary Statements**Prevention:**

Keep away from heat/sparks/open flames and other ignition sources.
No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment
Take precautionary measures against static discharge.
Wear protective gloves and clothing, eye protection and face protection.
Wash hands and forearms thoroughly after handling.
Obtain special instructions before use.

Response:	Do not handle until all safety precautions have been read and understood. Avoid breathing fumes/mist/vapors/spray. Use only outdoors or in a well-ventilated area. In case of fire, use water spray, fog, foam, or other approved media. Remove/take off immediately all contaminated clothing and wash before reuse. If on skin or hair, wash with plenty of soap and water. If skin irritation occurs, seek medical attention. If swallowed, immediately call a poison control center or doctor. Do not induce vomiting. If inhaled, remove victim to fresh air and keep at rest in a position comfortable for breathing. Call poison control center of doctor if you feel unwell. Collect spillage.
Storage:	Store in a well-ventilated place. Keep cool. Store locked up. Keep container tightly closed.
Disposal:	Dispose of contents/container in accordance with local/regional/national/international regulations.
Other Hazards:	Slightly irritating to respiratory system. Liquid evaporates quickly and can ignite, leading to flash fire, or an explosion in a confined space. Vapor in the headspace of tanks and containers may ignite and explode at temperatures exceeding auto-ignition temperature, where vapor concentrations are within the flammability range. Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire. May ignite on surfaces at temperatures above auto-ignition temperature.

*** 3. Composition/Information on Ingredients

Mixture Description: A complex combination of hydrocarbons including naphthalene, paraffin, and aromatics.

CAS #	Chemical Identity/ Component	Concentration %
8008-20-6	Kerosene	99.96 – 99.99%
91-20-3	Naphthalene	0.01-0.04%

Additional Information: Dyes and markers can be used to indicate tax status and prevent fraud.

*** 4. First Aid Measures ***

General Information:	Treat exposure symptomatically. Seek medical attention, or contact poison control center or poison control specialist immediately if large quantities have been inhaled or ingested.
Inhalation:	Remove to fresh air. If not breathing, institute rescue breathing. If breathing is difficult, ensure airway is clear and give oxygen. Seek medical attention immediately.
Skin Contact:	Remove contaminated clothing. Wash contaminated areas thoroughly with soap and water or with waterless hand cleanser. If irritation or redness develops, seek medical attention. If clothing is to be laundered, inform the person performing the operation of contaminant's hazardous properties.
Eye Contact:	Flush immediately with large amounts of water for at least 15 minutes. Hold eyelids open to ensure adequate flushing. Seek medical attention.
Ingestion:	DO NOT INDUCE VOMITING. Place victim's head below knees if spontaneous vomiting occurs to reduce the risk of aspiration. Monitor for breathing difficulties. Seek immediate medical attention.

***** 5. Fire Fighting Measures *****

General Fire Hazards:	See section 9 for Flammability Properties. Vapors may be ignited rapidly when exposed to heat, spark, open flame, or other source of ignition. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.
Suitable Extinguishing Media:	Water spray, fog, foam, dry chemical, or CO ₂ .
Unsuitable Extinguishing Media:	Do not use water in a jet.
Fire Fighting Equip./Instructions:	Small fires in the beginning stage may typically be extinguished using handheld portable fire extinguishers and other firefighting equipment. Avoid excessive water spray application. Firefighting activities that may result in potential exposure to high heat, smoke, or toxic by-products of combustion should require NIOSH/MSHA approved pressure-demand self-contained breathing apparatus with full face piece and full protective clothing. Isolate area around container involved in fire. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

***** 6. Accidental Release Measures *****

Recovery and Neutralization:	Carefully contain and stop the source of the spill, if safe to do so Avoid contact with spilled or released material. Evacuate the area of all non-essential personnel. Ventilate contaminated area thoroughly.
Materials and Methods for Cleanup:	Allow residues to evaporate or soak up with sand or other appropriate absorbent material and dispose of according to relevant local, regional, national, and international regulations. Carefully scoop, shovel, or sweep up into a waste container for reclamation or disposal.
Emergency Methods:	Evacuate non-essential personnel and remove or secure all ignition sources. Consider wind direction, and stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc to confirm spill areas. Spills may infiltrate subsurface soil and groundwater. Professional assistance may be necessary to determine the extent of subsurface impact.
Personal Protections and Protective Equipment:	Wear full protective clothing and self-contained breathing apparatus.
Environmental Precautions:	Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. Fire-fighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection.

***** 7. Handling and Storage *****

Handling Procedures:	Avoid breathing vapors. Avoid skin contact with material. Use only in well ventilated areas. Keep away from heat, sparks, excessive temperatures, open flame, or any other ignition source. Bond and/or ground containers during product transfer to reduce the possibility of static-initiated fire or explosion. Use proper personal protective equipment. Air-dry contaminated clothing in a well-ventilated before
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laundering. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires. Prevent spillages. Use local exhaust ventilation if there is risk of inhalation of vapors, mists, or aerosols. Never siphon by mouth. Contaminated leather articles including shoes cannot be decontaminated and should be destroyed to prevent reuse. Eating, drinking, and smoking should be prohibited in areas where this material is handled, stored, and processed.

Storage Procedures:

Keep away from flame, sparks, and excessive temperatures. Use approved vented containers. Keep containers tightly closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld, or expose such containers to sources of ignition. Store product in a well-ventilated area.

Incompatibles:

Keep away from strong oxidizers.

Other Advice:

Ensure that all local regulations regarding handling and storage facilities are followed.

***** 8. Exposure Controls/Personal Protection *****

Component Exposure Limits:

Material	Source	Type	Ppm	mg/m3	Notation
	ACGIH	TWA		200 mg/m3	Application restricted to conditions in which there re negligible aerosol exposures as total hydrocarbon vapor
	ACIGH	SKIN_DES			Can be absorbed through the skin as total hydrocarbon vapor
Naphthalene	ACIGH	TWA	10 ppm		
	ACIGH	SKIN_DES	15 ppm		Can be absorbed through the skin

Engineering Measures/Controls:

Use adequate ventilation to keep concentrations of this product below occupational exposure flammability limits, particularly in confined spaces. This product is a static accumulating liquid. Ground/bond container and equipment. These alone may be sufficient to remove static electricity. Use sealed systems whenever possible.

Personal Protective Equipment:

Personal Protective Equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

Respiratory Protection:

Use of an approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations ar or may be expected to exceed

Hand/Skin Protection:	exposure limits or for odor or irritation. Where air-filtering respirators are unsuitable (e.g. airborne concentrations are high, risk of oxygen breathing apparatus becomes necessary). Gloves of an approved material (nitrile, neoprene, or PVC) are recommended. After using gloves, hands should be washed and dried thoroughly. Suitability and durability of a glove is dependent on usage. Always seek advice from glove manufacturers. Contaminated gloves should be replaced. Chemical protective boots and aprons should be used where there is a risk of splashing.
Eye Protection:	Where splashing is possible, chemical splash goggles or face shield are recommended.

*** 9. Physical and Chemical Properties ***

Appearance:	Clear, colorless liquid
Odor:	Characteristic petroleum/hydrocarbon distillate odor
Upper/lower flammability limits:	0.7 – 5.0 % (V)
Flammability:	Flammable liquid
Odor threshold:	ND
Vapor pressure:	0.85 psi
Vapor density:	4-5
pH:	ND
Relative density:	0.793 – 0.811
Melting point/freezing point	ND
Solubility:	Negligible
Auto-ignition temperature:	> 400°F
Flash point:	> 100°F
Initial boiling point and boiling range:	290°F – 540°F
Evaporation rate:	ND
Partition coefficient: n-octanol/water:	ND
Decomposition temperature:	ND
Viscosity:	ND

*** 10. Stability and Reactivity ***

Chemical Stability:	This material is stable under normal conditions. If heated, the product's static accumulation will rise and could cause flash fire.
Hazardous Reaction Potential:	Will not occur.
Conditions to Avoid:	Avoid heat, sparks, open flames and other ignition sources.
Incompatible Materials:	Strong oxidizers.
Hazardous Decomposition Products:	No hazardous decomposition products were expected to form during normal storage. Combustion produces carbon monoxide, carbon dioxide, aldehydes, and other products of incomplete combustion (smoke).

*** 11. Toxicological Information ***

Basis for Assessment:	Information given is based on product data, a knowledge of the components, and the toxicology of similar products.
Likely Routes of Exposure:	Inhalation, skin contact, and eye contact are the primary routes of exposure, although accidental ingestion is possible.
Acute Oral Toxicity:	Low toxicity: LD50 > 5000 mg/kg, Rat

Acute Dermal Toxicity:	Low toxicity: LD50 > 2000 mg/kg, Rabbit
Acute Inhalation Toxicity:	Low toxicity by inhalation: LC50 > 5 mg/l, 4h, Rat
Skin Corrosion/Irritation:	Can cause skin irritation.
Serious Eye Damage/Irritation:	Contact with eyes may cause mild to moderate irritation.
Respiratory Irritation:	Inhalation of vapors or mist may cause respiratory irritation.
Respiratory or Skin Sensitization:	Not a skin sensitizer.
Aspiration Hazard:	May cause chemical pneumonia which can be fatal if aspirated into the lungs when swallowed or vomited.
Germ Cell Mutagenicity:	Not considered a mutagenic hazard.
Carcinogenicity:	Suspected of causing cancer. Risk of cancer depends on duration and Level of exposure.
Reproductive and Development Toxicity:	Not expected to impair fertility. Not expected to be a developmental toxicant.
Specific Target Organ Toxicity – Single Exposure:	Very high concentrations may cause central nervous system depression resulting in headaches, dizziness, and nausea.
Specific Target Organ Toxicity – Repeated Exposure:	This product is not reported to have any specific target organ general toxicity repeat exposure effects.

*** 12. Ecological Information ***

Basis for Assessment:	Fuels are typically made from blending several refinery streams. Ecotoxicological studies have been carried out on a variety of hydrocarbon blends and streams but not those containing additives. Information given is based on knowledge of the components and the ecotoxicology of similar products.
Acute Toxicity:	Toxic to aquatic organisms.
Mobility:	May partition into air, soil and water.
Persistence/Degradability:	Readily biodegradable in the environment.
Bioaccumulation:	Not expected to bio-accumulate in aquatic organisms.
Other Adverse Effects:	Films formed on water may affect oxygen transfer and damage organisms.

*** 13. Disposal Considerations ***

Refer to Section 6 for details on cleanup

Material Disposal:	Recover or recycle if possible. Waste should be disposed of in accordance to applicable local, regional, national, and international regulations.
Container Disposal:	Drain container thoroughly. Comply with all applicable local, regional, national, and international laws regarding disposal.
Local Legislation:	Disposal should be in accordance with applicable regional national, and local laws and regulations. Local regulations may be more stringent than regional or national requirements and must be in compliance.

***** 14. Transport Information *****

DOT Information

Shipping Name: Kerosene
 NA #: 1223
 Hazard Class: 3
 Packing Group: III
 Placard:



***** 15. Regulatory Information *****

Component Analysis

UA TSCA Chemical Inventory Section 8(b): This product and/or its components are listed on the TSCA Chemical Inventory.
OSHA Hazard Communication Standard This product has been evaluated and determined to be hazardous as defined in OSHA's Hazard Communication Standard.

EPA Superfund Amendment & Reauthorization Act (SARA):

This material contains one of more of the following chemicals required to be identified under SARA Section 302, SARA Section 304, SARA Section 313, SARA Section 311/312, and/or CERCLA.

SARA Section 302 This product contains the following component(s) that have been listed on EPA's Extremely Hazardous Substance (EHS) List:

Name	SARA Section 302 EHS and TPQs
Saturated Hydrocarbons	NA
Aromatic Hydrocarbons	NA
Unsaturated Hydrocarbons	NA
Naphthalene	NA

SARA Section 304 This product contains the following component(s) identified either as an EHS or a CERCLA Hazardous substance which in case of a spill or release may be subject to SARA reporting requirements:

Name	SARA Section 304 EHS and TPQs
Saturated Hydrocarbons	NA
Aromatic Hydrocarbons	NA
Unsaturated Hydrocarbons	NA
Naphthalene	= 100 lb final RQ

SARA Section 313 This product contains the following component(s) that may be subject to reporting on the Toxic Release Inventory (TRI) Form R:

Name	SARA Section 313 Emission Reporting
Saturated Hydrocarbons	None
Aromatic Hydrocarbons	None
Unsaturated Hydrocarbons	None
Naphthalene	= 0.1% de minimis concentration

SARA Section 311/312 The following EPA hazard categories apply to this product:

- Acute Fire Hazard
- Chronic Health Hazard
- Fire Hazard

***** 16. Other Information *****

NFPA Hazard Rating:

Health: 2
 Fire: 2
 Reactivity: 0



HMIS Hazard Rating:

Health:	2
Fire:	2
Physical:	0

**Additional Information:**

This document contains important information to ensure the safe storage, handling, and use of this product. The information in this document should be brought to the attention of the person in your organization responsible for advising on safety matters.

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