

MATERIAL SAFETY DATA SHEET
Revision Date: 01/16/2003

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT: SH HIGH SUL DIESEL 1 (0.125%_s)
MSDS NUMBER: 401498E - 0
PRODUCT CODE(S): 26960

MANUFACTURER ADDRESS: Shell Oil Products US, P. O. Box 4453, Houston, TX.
77210-4453

TELEPHONE NUMBERS

Spill Information: (877) 242-7400
Health Information: (877) 504-9351
MSDS Assistance Number: (877) 276-7285

SECTION 2 PRODUCT/INGREDIENTS

CAS#	CONCENTRATION	INGREDIENTS
Mixture	100 %weight	Diesel 1
8008-20-6	96.4 - 99.99 %weight	Kerosene
91-20-3	0 - 2.99 %weight	Naphthalene
7704-34-9	0 - 0.49 %weight	Sulfur
71-43-2	0.01 - 0.08 %weight	Benzene

SECTION 3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Appearance & Odor: Clear light straw to light red liquid. Kerosene odor.

Health Hazards: May cause skin irritation. May be harmful or fatal if swallowed. Do not induce vomiting. May cause aspiration pneumonitis.

NFPA Rating (Health, Fire, Reactivity): 2, 2, 0

Hazard Rating: Least - 0 Slight - 1 Moderate - 2 High - 3

Extreme - 4

Inhalation:

In applications where vapors (caused by high temperature) or mists (caused by mixing or spraying) are created, breathing may cause a mild burning sensation in the nose, throat and lungs.

Eye Irritation:

May cause slight irritation of the eyes. If irritation occurs, a temporary burning sensation, minor redness, swelling, and/or blurred vision may result.

Skin Contact:

May be irritating to the skin causing a burning sensation, redness and/or swelling. Other adverse effects not expected from brief skin contact.

Ingestion:

This material may be harmful or fatal if swallowed. Ingestion may result in vomiting; aspiration (breathing) of vomitus into lungs must be avoided as even small quantities may result in aspiration pneumonitis. Generally considered to have a low order of acute oral toxicity.

Other Health Effects:

Carcinogenic in animal tests. It is probable that the material causes cancer in laboratory animals.

This material and/or components may cause the following effects:

Genotoxicity

Primary Target Organs:

The following organs and/or organ systems may be damaged by overexposure to this material and/or its components.

Eye, Blood/Blood Forming Organs, Kidney, Liver

Signs and Symptoms:

Irritation as noted above. Aspiration pneumonitis may be evidenced by coughing, labored breathing and cyanosis (bluish skin); in severe cases death may occur. Damage to blood-forming organs may be evidenced by: a) easy fatigability and pallor (RBC), b) decreased resistance to infection (WBC effect), c) excessive bruising and bleeding (platelet effect). Kidney damage may be indicated by changes in urine output or appearance, pain upon urination or in the lower back or general edema (swelling from fluid retention). Liver damage may be indicated by loss of appetite, jaundice (yellowish skin and eye color), fatigue and sometimes pain and swelling in the upper right abdomen.

For additional health information, refer to section 11.

SECTION 4 FIRST AID MEASURES

Inhalation:

If the victim has difficulty breathing or tightness of the chest, is dizzy, vomiting or unresponsive, give 100% oxygen with rescue breathing or CPR as required and transport to the nearest medical facility.

Skin:

Remove contaminated clothing. Flush with large amounts of water for at least 15 minutes and follow by washing with soap if available. If redness, swelling, pain and/or blisters occur, transport to the nearest medical facility for additional treatment.

Eye:

Flush eyes with plenty of water while holding eyelids open. Rest eyes for 30 minutes. If redness, burning, blurred vision or swelling occur, transport to nearest medical facility for additional treatment.

Ingestion:

DO NOT take internally. In general no treatment is necessary unless large quantities are swallowed, however, get medical advice. Have victim rinse mouth out with water, then drink sips of water to remove taste from mouth. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

Note to Physician:

If more than 2.0ml/kg body weight has been ingested and vomiting has not

occurred, emesis should be induced with supervision. Keep victim's head below hips to prevent aspiration. If symptoms such as loss of gag reflex, convulsions, or unconsciousness occur before emesis, gastric lavage using a cuffed endotracheal tube should be considered.

SECTION 5 FIRE FIGHTING MEASURES

Flash Point [Method]: >100 °F/>37.78 °C [Closed Cup]
Flammability in Air: 0.7 - 5 %volume

Extinguishing Media:

Material will float and can be re-ignited on surface of water. Use water fog, 'alcohol foam', dry chemical or carbon dioxide (CO2) to extinguish flames. Do not use a direct stream of water.

Fire Fighting Instructions:

CAUTION! COMBUSTIBLE. Clear fire area of all non-emergency personnel. Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots), including a positive pressure, NIOSH approved, self-contained breathing apparatus. Cool surrounding equipment, fire-exposed containers and structures with water. Container areas exposed to direct flame contact should be cooled with large quantities of water (500 gallons water per minute flame impingement exposure) to prevent weakening of container structure.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures:

CAUTION! COMBUSTIBLE. Eliminate potential sources of ignition. Handling equipment must be bonded and grounded to prevent sparking.

Wear appropriate personal protective equipment when cleaning up spills. Refer to Section 8.

Spill Management:

Shut off source of leak if safe to do so. Dike and contain spill.

FOR LARGE SPILLS: Remove with vacuum truck or pump to storage/salvage vessels.

FOR SMALL SPILLS: Soak up residue with an absorbent such as clay, sand or other suitable material. Place in non-leaking container and seal tightly for proper disposal.

Reporting:

U.S. regulations require reporting releases of this material to the environment which exceed the reportable quantity to the National Response Center at (800)424-8802.

CWA: This product is an oil as defined under Section 311 of EPA's Clean Water Act (CWA). Spills into or leading to surface waters that cause a sheen must be reported to the National Response Center, 1-800-424-8802.

requirements.

Published literature, test data and/or glove and clothing manufacturers indicate the best protection is provided by:
Neoprene, or Nitrile Rubber

Respiratory Protection:

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, an approved respirator must be worn. Respirator selection, use and maintenance should be in accordance with the requirements of the OSHA Respiratory Protection Standard, 29 CFR 1910.134.

Types of respirator(s) to be considered in the selection process include:
Supplied-Air Respirator. Air-Purifying Respirator for Organic Vapors.
Self-contained breathing apparatus for use in environments with unknown concentrations or emergency situations.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance & Odor: Clear light straw to light red liquid. Kerosene odor.
Substance Chemical Family: Petroleum Hydrocarbon, Fuel Oil
Appearance: Clear light straw to light red liquid.

Boiling Point: 320 °F

Flammability in Air: 0.7 - 5 %volume

Flash Point: > 100 °F [Closed Cup]

Specific Gravity: 0.8 - 0.82

Stability: Stable

Viscosity: 1.3 - 2.4 cSt @ 40 °C

SECTION 10 REACTIVITY AND STABILITY

Stability:

Material is stable under normal conditions.

Conditions to Avoid:

Avoid heat and open flames.

Materials to Avoid:

Avoid contact with strong oxidizing agents.

Hazardous Decomposition Products:

Thermal decomposition products are highly dependent on combustion conditions. A complex mixture of airborne solids, liquids and gases will evolve when this material undergoes pyrolysis or combustion. Carbon Monoxide, Hydrogen Sulfide, Unidentified organic compounds, Sulfur Oxides and other unidentified organic compounds may be formed upon combustion.

SECTION 11 TOXICOLOGICAL INFORMATION

Acute Toxicity

Dermal LD50 > 2 g/kg (Rabbit) OSHA: Non-Toxic Based on components(s)
Eye Irritation Draize 2.0 [Rabbit, 1 HOUR(S)] OSHA: Non-Irritating Based on components(s)
Oral LD50 > 5 g/kg (Rat) OSHA: Non-Toxic Based on components(s)
Skin Irritation Draize OSHA: Irritating Based on components(s)

Carcinogenicity Classification

Diesel 1

NTP: No IARC: No ACGIH: No OSHA: No

Naphthalene

NTP: Yes IARC: Yes ACGIH: A4 OSHA: No

Carcinogenicity

Long-term skin painting of kerosene and related materials caused malignant skin tumors with long latency periods (appearing late in the animals lives) in mice. Mechanistic studies suggest that these tumors are a secondary effect related to prolonged skin injury and irritation. A two-year inhalation study in rats found that naphthalene caused tumors in the lining of the nose (olfactory epithelial neuroblastoma) and respiratory tract (respiratory epithelial adenoma) of both male and female animals.

Eye

Animal studies indicate that long-term exposure to high doses of naphthalene can cause the formation of lens opacities (cataracts). Case reports suggest that oral, dermal and inhalation exposure may cause similar effects in humans. However, large-scale studies in exposed workers have failed to confirm this.

Genotoxicity

The vast majority of genotoxicity tests conducted on kerosene and related petroleum streams have not indicated genetic toxicity or mutagenicity. However, a few exceptions have been reported. One kerosene-like material was found to be mutagenic in the L5178Y mouse lymphoma assay with metabolic activation (a test-tube procedure) and to cause chromosome damage in the in vivo (live animal) rat cytogenetics assay. A more highly-refined middle distillate material (Jet Fuel A) was reported to produce chromosome damage in at least one rat study.

Blood/Blood Forming Organs

Hemolytic anemia is the most frequent manifestation of naphthalene exposure in humans with secondary effects reported including jaundice, neurological damage, and respiratory difficulty.

Kidney

Nephropathy (kidney damage) caused by kerosene inhalation appears to be male rat specific (accumulation of alpha-2-u globulin) and is probably not relevant to humans. Renal toxicity has been reported in case studies of humans who ingested naphthalene.

Liver

Tissue damage was observed in some organs of rabbits following repeated skin exposure to related petroleum materials. Microscopic changes seen in the liver (mottled necrosis and centrilobular degeneration), kidney and bladder (hyperplasia) were considered to be secondary to (caused by) the severe skin irritancy.

SECTION 12 ECOLOGICAL INFORMATION

Environmental Impact Summary:

There is no ecological data available for this product.

SECTION 13 DISPOSAL CONSIDERATIONS

RCRA Information:

Under RCRA, it is the responsibility of the user of the material to determine, at the time of the disposal, whether the material meets RCRA criteria for hazardous waste. This is because material uses, transformations, mixtures, processes, etc. may affect the classification. Refer to the latest EPA, state and local regulations regarding proper disposal.

SECTION 14 TRANSPORT INFORMATION

US Department of Transportation Classification

Proper Shipping Name: Diesel Fuel
Identification Number: NA1993
Hazard Class/Division: Combustible Liquid
Packing Group: III
Hazardous Substance/Material RQ: Naphthalene / 100 lbs

Combustible Liquid: This material is not regulated under 49 CFR if in a container of 119 gallon capacity or less.
Oil: This product is an oil under 49CFR (DOT) Part 130. If shipped by rail or highway in a tank with a capacity of 3500 gallons or more, it is subject to these requirements. Mixtures or solutions containing 10% or more of this product may also be subject to this rule.
Emergency Response Guide # 128

International Air Transport Association

Hazard Class/Division: 3 (Flammable Liquid)
Identification Number: UN1202
Packing Group: III

International Maritime Organization Classification

Hazard Class/Division: 3 (Flammable Liquid)
Identification Number: UN1202
Packing Group: III
Proper Shipping Name: Diesel Fuel

SECTION 15 REGULATORY INFORMATION

FEDERAL REGULATORY STATUS

OSHA Classification:

Product is hazardous according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Comprehensive Environmental Release, Compensation & Liability Act (CERCLA):

Benzene RQ 10 lbs Reportable Spill => 11111 lbs or
1666 gal

Clean Air Act (CAA):

This material is classified as a Hazardous Air Pollutant under the Clean Air Act (CAA).

Superfund Amendment & Reauthorization Act (SARA) Title III:

SARA Extremely Hazardous Substances (302/304):

Sulfur RQ 100 lbs Reportable Spill => 20000 lbs or
2999 gal

SARA Hazard Categories (311/312):

Immediate Health:YES Delayed Health:YES Fire:YES Pressure:NO
Reactivity:NO

SARA Toxic Release Inventory (TRI) (313):

Naphthalene

Toxic Substances Control Act (TSCA) Status:

This material is listed on the EPA/TSCA Inventory of Chemical Substances.

Other Chemical Inventories:

Australian AICS, Canadian DSL, Chinese Inventory, European EINECS, Korean Inventory, Philippines PICCS,

State Regulation

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65).

WARNING: This product contains a chemical(s) known to the State of California to cause cancer. WARNING: This product contains a chemical(s) known to the State of California to cause cancer.

WARNING: This product contains a chemical(s) known to the State of California to cause birth defects or other reproductive harm.

New Jersey Right-To-Know Chemical List:

Naphthalene (1322) 0 - 2.99 %weight

Pennsylvania Right-To-Know Chemical List:

Benzene (71-43-2) 0.01 - 0.08 %weight Spec Haz Sub/Env Hazardous
Naphthalene (91-20-3) 0 - 2.99 %weight Environmental Hazard

SECTION 16 OTHER INFORMATION

Revision#: 0

Revision Date: 01/16/2003

Revisions since last change (discussion): This Material Safety Data Sheet (MSDS) has been newly created to fully comply with the guidance contained in the ANSI MSDS standard (ANSI Z400.1-1998). We encourage you to take the opportunity to read the MSDS and review the information contained therein.

SECTION 17 LABEL INFORMATION

READ AND UNDERSTAND MATERIAL SAFETY DATA SHEET BEFORE HANDLING OR DISPOSING OF PRODUCT. THIS LABEL COMPLIES WITH THE REQUIREMENTS OF THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200) FOR USE IN THE WORKPLACE. THIS LABEL IS NOT INTENDED TO BE USED WITH PACKAGING INTENDED FOR SALE TO CONSUMERS AND MAY NOT CONFORM WITH THE REQUIREMENTS OF THE CONSUMER PRODUCT SAFETY ACT OR OTHER RELATED REGULATORY REQUIREMENTS.

PRODUCT CODE(S): 26960

SH HIGH SUL DIESEL 1 (0.125%_s)

CAUTION!

COMBUSTIBLE LIQUID! MAY CAUSE SKIN IRRITATION. ASPIRATION HAZARD IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE. PROLONGED OR REPEATED SKIN CONTACT MAY CAUSE OIL ACNE OR DERMATITIS.

MATERIAL AND/OR COMPONENTS THAT HAVE BEEN SHOWN TO CAUSE CANCER INCLUDE:
Naphthalene

MAY CAUSE DAMAGE TO: Eye, Blood/Blood Forming Organs, Kidney, Liver

This material and/or components may cause the following effects:
Genotoxicity

Precautionary Measures:

Avoid heat and open flames. Avoid breathing of vapors, fumes, or mist. Do not take internally. Use only with adequate ventilation. Avoid contact with eyes, skin and clothing. Keep container closed when not in use. Wash thoroughly after handling.

FIRST AID

Inhalation: If the victim has difficulty breathing or tightness of the chest, is dizzy, vomiting or unresponsive, give 100% oxygen with rescue breathing or CPR as required and transport to the nearest medical facility.

Skin Contact: Remove contaminated clothing. Flush with large amounts of water for at least 15 minutes and follow by washing with soap if available. If redness, swelling, pain and/or blisters occur, transport to the nearest medical facility for additional treatment.

Eye Contact: Flush eyes with plenty of water while holding eyelids open. Rest eyes for 30 minutes. If redness, burning, blurred vision or swelling occur, transport to nearest medical facility for additional treatment.

Ingestion: DO NOT take internally. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Have victim rinse mouth out with water, then drink sips of water to remove taste from mouth. In general no treatment is necessary unless large quantities are swallowed, however, get medical advice.

FIRE

In case of fire, Use water fog, 'alcohol foam', dry chemical or carbon dioxide (CO2) to extinguish flames. Do not use a direct stream of water. Material will float and can be re-ignited on surface of water.

SPILL OR LEAK

Dike and contain spill.

FOR LARGE SPILLS: Remove with vacuum truck or pump to storage/salvage vessels.

FOR SMALL SPILLS: Soak up residue with an absorbent such as clay, sand or other suitable material. Place in non-leaking container and seal tightly for proper disposal.

CONTAINS: Kerosene, 8008-20-6; Naphthalene, 91-20-3; Sulfur, 7704-34-9; Benzene, 71-43-2

NFPA Rating (Health, Fire, Reactivity): 2, 2, 0

TRANSPORTATION

US Department of Transportation Classification

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Name and Address

Shell Oil Products US
P. O. Box 4453
Houston, TX 77210-4453

ADMINISTRATIVE INFORMATION

MANUFACTURER ADDRESS: Shell Oil Products US, P. O. Box 4453, Houston, TX. 77210-4453

Company Product Stewardship & Regulatory Compliance Contact: David Snyder

Phone Number: (281) 874-7728

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