



Material Safety Data Sheet

MSDS ID NO.: 0242MAR019
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1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product name: Marathon No. 4 Fuel Oil
Synonym: No. 4 Fuel Oil
Chemical Family: Petroleum Hydrocarbon
Formula: Mixture

Manufacturer:
Marathon Petroleum Company LLC
539 South Main Street
Findlay OH 45840

Other information: 419-421-3070
Emergency telephone number: 877-627-5463

2. COMPOSITION/INFORMATION ON INGREDIENTS

Heavy or residual fuel is a complex mixture of high molecular weight hydrocarbons produced from high temperature treatment of heavy petroleum fractions.

Product information:

Name	CAS Number	Weight %	ACGIH Exposure Limits:	OSHA - Vacated PELs - Time Weighted Ave	Other:
Marathon No. 4 Fuel Oil	Mixture	100			

Component Information:

Name	CAS Number	Weight %	ACGIH Exposure Limits:	OSHA - Vacated PELs - Time Weighted Ave	Other:
Catalytic Cracked Clarified Oil	64741-62-4	0-60			
No. 6 Fuel Oil	68553-00-4	30-60			
Diesel Oil	68334-30-5	10-40	= 100 mg/m ³ TWA vapor and aerosol, as total hydrocarbons skin - potential for cutaneous absorption (as total hydrocarbons)		
Petroleum Residua	Mixture	0-24			
Sulfur Compounds	Mixture	1-3			
Naphthalene	91-20-3	0.01-0.2	Skin - potential significant contribution to overall exposure by the cutaneous route = 10 ppm TWA = 15 ppm STEL	= 10 ppm TWA = 50 mg/m ³ TWA = 15 ppm STEL = 75 mg/m ³ STEL	
Hydrogen Sulfide	7783-06-4	0-0.01	= 10 ppm TWA = 15 ppm STEL	= 10 ppm TWA = 14 mg/m ³ TWA = 15 ppm STEL = 21 mg/m ³ STEL	

Notes:

The manufacturer has voluntarily elected to reflect exposure limits contained in OSHA's 1989 air contaminants standard in its MSDS's, even though certain of those exposure limits were vacated in 1992.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

THIS PRODUCT IS A BROWN TO BLACK VISCOUS COLORED LIQUID. THIS PRODUCT IS CONSIDERED TO BE A COMBUSTIBLE LIQUID PER THE OSHA HAZARD COMMUNICATION STANDARD AND SHOULD BE KEPT AWAY FROM HEAT, FLAME AND SOURCES OF IGNITION. LONG-TERM SKIN EXPOSURE TO COMPONENTS OF THIS PRODUCT HAS CAUSED CANCER IN LABORATORY ANIMALS AND HUMANS. REPEATED SKIN CONTACT TO SOME COMPONENTS OF THIS PRODUCT HAVE PRODUCED SYSTEMIC TOXICITY (INCLUDING LIVER DAMAGE) IN LABORATORY ANIMALS. WHEN HEATED THIS MATERIAL MAY VENT TOXIC LEVELS OF HYDROGEN SULFIDE (H₂S) VAPORS THAT ACCUMULATE IN THE VAPOR SPACES OF STORAGE AND TRANSPORT COMPARTMENTS. H₂S VAPORS CAN CAUSE EYE, SKIN, AND RESPIRATORY TRACT IRRITATION AND ASPHYXIATION.

OSHA WARNING LABEL:

DANGER!

COMBUSTIBLE LIQUID.

LONG-TERM SKIN EXPOSURE TO COMPONENTS OF THIS PRODUCT HAS CAUSED CANCER IN LABORATORY ANIMALS.

REPEATED SKIN CONTACT TO SOME COMPONENTS IN THIS PRODUCT HAS PRODUCED SYSTEMIC TOXICITY (INCLUDING LIVER DAMAGE) IN LABORATORY ANIMALS.

MAY VENT HARMFUL CONCENTRATIONS OF HYDROGEN SULFIDE (H₂S) GAS WHICH CAN CAUSE RESPIRATORY IRRITATION AND ASPHYXIATION.

CONSUMER WARNING LABEL:

A CONSUMER WARNING LABEL IS NOT APPLICABLE FOR THIS PRODUCT.

Inhalation:

Exposure to vapor or mist may cause pulmonary irritation, dizziness, nausea and loss of consciousness. Significant concentrations of hydrogen sulfide gas can be present in the vapor space of storage tanks and bulk transport compartments (See Sections 7, 8 & 11).

Ingestion:

Product would be expected to have a low order of acute toxicity. Significant ingestion of some components of this product may cause liver damage.

Skin contact:

Prolonged and repeated liquid contact can cause dermatitis, folliculitis or oil acne. Components of this product may cause skin sensitization. Components of this product can cause liver damage if absorbed through the skin.

Eye contact:

Liquid or vapor contact may result in slight eye irritation.

Carcinogenic Evaluation:

Product information:

Name	IARC Carcinogens:	NTP Carcinogens:	ACGIH - Carcinogens:	OSHA - Select Carcinogens:
Marathon No. 4 Fuel Oil Mixture	NE			

Notes:

The International Agency for Research on Cancer (IARC) has determined that there is sufficient evidence for the carcinogenicity of residual (heavy) fuel oil in animals.

Component Information:

Name	IARC Carcinogens:	NTP Carcinogens:	ACGIH - Carcinogens:	OSHA - Select Carcinogens:
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Diesel Oil 68334-30-5	Monograph 45, 1989; (Overall evaluation upgraded from 3 to 2B with supporting evidence from other data relevant to the evaluation of carcinogenicity and its mechanisms)		A3 - Animal Carcinogen (as total hydrocarbons)	
Naphthalene 91-20-3	Monograph 82, 2002	Reasonably Anticipated To Be A Carcinogen Listed	A4 - Not Classifiable as a Human Carcinogen	Present

Notes:

The International Agency for Research on Cancer (IARC) has determined that there is sufficient evidence for the carcinogenicity of catalytically cracked clarified oil (carbonblack feedstock) in animals.

The International Agency for Research on Cancer (IARC) has determined that there is inadequate evidence for the carcinogenicity of diesel fuel/fuel oil in humans. IARC determined that there was limited evidence for the carcinogenicity of marine diesel fuel in animals. Distillate (light) diesel fuels were not classifiable as to their carcinogenicity to humans (Group 3A)

The International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP) have concluded that certain polycyclic aromatic hydrocarbons, i.e. (benzo(a)pyrene, benz(a)anthracene, benzo(a)phenanthrene, indeno(1,2,3-cd)pyrene, benzo(j)fluoranthene, benzo(j,k,fluorine, benzo(g,h,i)perylene, and 5-methylchrysene are probably carcinogenic to humans (Group 2A and B).

The International Agency for Research on Cancer (IARC) and the Environmental Protection Agency (EPA) have determined that naphthalene could be a possible human carcinogen.

4. FIRST AID MEASURES

Inhalation:

If affected, move person to fresh air. If breathing is difficult, administer oxygen. If not breathing or if no heartbeat, give artificial respiration or cardiopulmonary resuscitation (CPR). Immediately call a physician. If symptoms or irritation occur with any exposure, call a physician.

Skin contact:

Wash with soap and large amounts of water. Remove contaminated clothing. If symptoms or irritation occur, call a physician.

Ingestion:

Ingestion not likely. If swallowed, do not induce vomiting and do not give liquids. Immediately call a physician.

Eye contact:

Flush eyes with large amounts of tepid water for at least 15 minutes. If symptoms or irritation occur, call a physician.

Medical conditions aggravated by exposure:

Preexisting skin conditions, respiratory disorders, and impaired liver function may be aggravated by exposure to components of this product.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media:

For small fires, Class B fire extinguishing media such as CO2, dry chemical, foam (AFFF/ATC) or water spray can be used. For large fires, water spray, fog or foam (AFFF/ATC) can be used. Fire fighting should be attempted only by those who are adequately trained and equipped with proper protective equipment.

Specific hazards:

This product has been determined to be a combustible liquid per the OSHA Hazard Communication Standard and should be handled accordingly. For additional fire related information, see NFPA 30 or the North American Emergency Response Guide 128.

Special protective equipment for firefighters:

Avoid using straight water streams. Water spray and foam (AFFF/ATC) must be applied carefully to avoid frothing and from as far a distance as possible. Avoid excessive water spray application. Keep surrounding area cool with water spray from a distance and prevent further ignition of combustible material. Keep run-off water out of sewers and water sources.

Flash point:

131 (Min) F

Autoignition temperature:

No data available.

Flammable limits in air - lower (%):

1.0

Flammable limits in air - upper (%):

6.0

NFPA rating:

Health: 2

Flammability: 2

Reactivity: 1

Other: -

HMS classification:

Health: 2

Flammability: 2

Reactivity: 1

Special: *See Section 8 for guidance in selection of personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:

Keep public away. Isolate and evacuate area. Shut off source if safe to do so. Advise authorities and National Response Center (800-424-8802) if substance has entered a watercourse or sewer. Notify local health and pollution control agencies, if appropriate. Contain liquid with sand or soil. Recover and return product to source.

7. HANDLING AND STORAGE

Handling:

Comply with all applicable EPA, OSHA, NFPA and consistent state and local requirements. Use appropriate grounding and bonding practices. Store in properly closed containers that are appropriately labeled and in a cool well-ventilated area. Do not expose to heat, open flames, strong oxidizers or other sources of ignition. Do not cut, drill, grind or weld on empty containers since they may contain explosive residues. The fuel oil contained in this product may flash if product temperature is >131 F.

Harmful concentrations of hydrogen sulfide (H₂S) gas can be generated and accumulate in storage tanks and bulk transport compartments. Stay upwind and vent open hatches before unloading.

Avoid skin contact. Exercise good personal hygiene including removal of soiled clothing and prompt washing with soap and water.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT**Engineering measures:**

Local or general exhaust required in an enclosed area or when there is inadequate ventilation.

Respiratory protection:

Not required under normal conditions and adequate ventilation. Use atmosphere supplying respirators in confined spaces or when vapors exceed permissible limits; otherwise, an organic vapor respirator with pre-filter for fumes can be used. Self-contained breathing apparatus should be used for fire fighting.

Skin and body protection: Impermeable gloves (e.g., nitrile, viton, tyvek/saranex 23) to prevent skin contact.

Eye protection: Goggles and faceshield when handling hot material.

Hygiene measures: Use mechanical ventilation equipment that is explosion-proof. Chemical resistant apron or other protective clothing may be needed to avoid skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance:	Light-dark, Brown Liquid
Physical state (Solid/Liquid/Gas):	Liquid
Substance type (Pure/Mixture):	Mixture
Color:	Light to Dark brown
Odor:	Hydrocarbon
Molecular weight:	Not determined.
pH:	Neutral
Boiling point/range (5-95%):	400-1000 F
Melting point/range:	Not determined.
Decomposition temperature:	Not applicable.
Specific gravity:	Not determined
Density:	7.4-7.8 lbs/gal
Bulk density:	No data available.
Vapor density:	No data available.
Vapor pressure:	1 mm Hg @ 160 F
Evaporation rate:	No data available.
Solubility:	Negligible
Solubility in other solvents:	No data available.
Partition coefficient (n-octanol/water):	No data available.
VOC content(%):	No data available.
Viscosity:	No data available.

10. STABILITY AND REACTIVITY

Stability:	The material is stable at 70 F, 760 mm pressure.
Polymerization:	Will not occur.
Hazardous decomposition products:	Combustion produces carbon monoxide, aldehydes, aromatic and other hydrocarbons.
Materials to avoid:	Strong oxidizers such as nitrates, chlorates, peroxides.
Conditions to avoid:	Sources of heat or ignition.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:

Product information:

Name	CAS Number	Inhalation:	Dermal:	Oral:
Marathon No. 4 Fuel Oil	Mixture	No data available	No data available	No data available

Summary of health effect data on No. 4 fuel oil components:

Lifetime skin painting studies in animals with products similar to Heavy catalytic cracked distillate, No. 6 fuel oil and/or its components have produced tumors in animals following prolonged and repeated skin contact. Repeated dermal application has produced severe irritation and systemic toxicity in subacute toxicity studies.

Lifetime skin painting studies in animals with similar distillate fuels have produced weak to moderate carcinogenic activity following prolonged and repeated exposure. Similar middle distillates, when tested at nonirritating dose levels, did not show any significant carcinogenic activity indicating that this tumorigenic response is likely related to chronic irritation and not to dose. Repeated dermal application has produced severe irritation and systemic toxicity in subacute toxicity studies. Some components of this product were found to be positive in some mutagenicity tests while negative in others. The exact relationship between these results and human health is not known.

This product may contain >0.1% naphthalene. Exposure to naphthalene at 30 ppm for two years caused lung tumors in female mice. Male mice with the same exposure did not develop tumors. Exposure to 10-60 ppm naphthalene for 2 years caused tumors in the tissue lining of the nose and respiratory tract in male and female rats. Oral administration of 133-267 mg/kg/day of naphthalene in mice for up to 90 days did not produce mortality, systemic toxicity, adversely affect organ or body weight or produce changes in blood. Repeated oral administration of naphthalene produced an anemia in dogs. Repeated intraperitoneal doses of naphthalene produced lung damage in mice. Repeated high doses of naphthalene has caused the formation of cataracts and retinotoxicity in the eyes of rats and rabbits due to accumulation of 1,2-naphthoquinone, a toxic metabolite. Effects in human eyes is uncertain and not well documented. Pregnant rats administered intraperitoneal doses of naphthalene during gestation gave birth to offspring that had delayed heart and bone development. Pregnant mice given near lethal doses of naphthalene showed no significant maternal toxicity and a reduction in the number of pups per litter, but no gross abnormalities in offspring. Suppressed spermatogenesis and progeny development have been reported in mice, rats and guinea pigs after exposure to high concentrations of naphthalene in their drinking water. Certain groups or individuals, i.e., infants, Semites, Arabs, Asians and Blacks, with a certain blood enzyme deficiency (glucose-6-phosphate dehydrogenase) are particularly susceptible to hemolytic agents and can rapidly develop hemolytic anemia and systemic poisoning from ingestion or inhalation of naphthalene.

Catalytic cracked slurry oil (CCSO) may be present in concentrations up to 60% in this product. Lifetime skin painting studies in animals with CCSO have produced tumors in animals following prolonged and repeated skin contact. Repeated dermal application of CCSO (30 mg/kg/day for 13 weeks) in rats resulted in anemia, liver degeneration and injury to bone marrow and lymphoid tissues. 100% mortality was observed at 2,000 mg/kg/day within three weeks. Repeated dermal application (30 mg/kg/day) of CCSO to pregnant rats during gestation produced maternal and fetal toxicity. Deaths and systemic toxicity (liver, thymus and blood). The number of viable offspring decreased at doses of 30 mg/kg/day and above. Many of the developmental effects (anomalies, resorptions and growth inhibition) were observed at doses which produced maternal toxicity. In a separate developmental study CCSO produced decreases in body weights and food consumption at doses from 10-250 mg/kg/day. Although fertility and reproductive function were not affected, the no observable adverse effect level for CCSO administered dermally was 1 mg/kg/day.

This product contains polynuclear aromatic hydrocarbons (PAC) at a level of >0.1%. Some PACs that have been identified in this product such as benzo(a)pyrene, benz(a)anthracene and indeno(1,2,3-cd)pyrene have been shown to be carcinogenic in experimental animals. An increased risk of cancer has been observed in workers employed in the aluminum production, coal gasification, coal-tar pitch, coke production and iron and steel industries that had been occupationally exposed to polynuclear aromatic hydrocarbons. Since these kinds of PACs have been measured at high levels in air samples taken in these industries, The International Agency for Research on Cancer (IARC) has concluded that these PACs are probably carcinogenic to humans.

Hydrogen sulfide gas (H₂S) is toxic by inhalation. Prolonged breathing of 50-100 ppm H₂S vapors can produce eye and respiratory tract irritation. Higher concentrations (250-600 ppm) for 15-30 minutes can produce headache, dizziness, nervousness, nausea and pulmonary edema or bronchial pneumonia. Concentrations of >1000 ppm will cause immediate unconsciousness and death through respiratory paralysis. Rats and mice exposed to 80 ppm H₂S, 6 hrs/day, 5 days/week for 10 weeks, did not produce any toxicity except for irritation of nasal passages. H₂S did not affect reproduction and development (birth defects or neurotoxicity) in rats exposed to concentrations of 75-80 ppm or 150 ppm H₂S, respectively. Over the years a number of acute cases of H₂S poisonings have been reported. Complete and rapid recovery is the general rule. However, if the exposure was sufficiently intense and sustained causing cerebral hypoxia (lack of oxygen to the brain), neurologic effects such as amnesia, intention tremors or brain damage are possible.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects: Product can be toxic to fish and aquatic life. The 24 hour TLM of the water soluble fraction of bunker C fuel oil is 3-6 ppm in marine and estuarine crustaceans and fish.

13. DISPOSAL CONSIDERATIONS

Cleanup Considerations: This material as supplied and by itself, when discarded or disposed of, is not an EPA RCRA hazardous waste according to federal regulations. This material could become a hazardous waste if mixed or contaminated with a hazardous waste or other substance(s). It is the responsibility of the user to determine if disposal material is hazardous according to federal, state and local regulations.

14. TRANSPORT INFORMATION

49 CFR 172.101:

DOT:
Transport Information: This material when transported via US commerce would be regulated by DOT Regulations.

Proper shipping name:	Fuel Oil, No. 4
UN/Identification No:	NA 1993
Hazard Class:	3
Packing group:	III
DOT reportable quantity (lbs):	Not applicable.

TDG (Canada):

Proper shipping name:	Fuel Oil, No. 4
UN/Identification No:	NA 1993
Hazard Class:	3
Packing group:	III
Regulated substances:	Not applicable.

15. REGULATORY INFORMATION

Federal Regulatory Information:

US 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):

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

Name	CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs
Catalytic Cracked Clarified Oil	NA
No. 6 Fuel Oil	NA
Diesel Oil	NA
Petroleum Residua	NA
Sulfur Compounds	NA
Naphthalene	NA
Hydrogen Sulfide	hydrogen sulfide

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	CERCLA/SARA - Hazardous Substances and their Reportable Quantities
Catalytic Cracked Clarified Oil	NA
No. 6 Fuel Oil	NA
Diesel Oil	NA
Petroleum Residua	NA
Sulfur Compounds	NA
Naphthalene	= 0.454 kg final RQ = 1 lb final RQ = 100 lb final RQ = 45.4 kg final RQ
Hydrogen Sulfide	= 100 lb final RQ = 45.4 kg final RQ

SARA Section 311/312:

The following EPA hazard categories apply to this product:

Acute Health Hazard
Chronic Health Hazard
Fire Hazard

SARA Section 313:

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

Name	CERCLA/SARA 313 Emission reporting:
Catalytic Cracked Clarified Oil	None
No. 6 Fuel Oil	None
Diesel Oil	None
Petroleum Residua	None
Sulfur Compounds	None
Naphthalene	= 0.1 % de minimis concentration
Hydrogen Sulfide	None

State and Community Right-To-Know Regulations:

The following component(s) of this material are identified on the regulatory lists below:

Catalytic Cracked Clarified Oil

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	Not Listed.
Pennsylvania Right-To-Know:	Not Listed.
Massachusetts Right-To Know:	Not Listed.
Florida substance List:	Not Listed.
Rhode Island Right-To-Know:	Not Listed
Michigan critical materials register list:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed

New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed
No. 6 Fuel Oil	
Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	Not Listed.
Pennsylvania Right-To-Know:	Not Listed.
Massachusetts Right-To Know:	Not Listed.
Florida substance List:	Not Listed.
Rhode Island Right-To-Know:	Not Listed
Michigan critical materials register list:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed
Diesel Oil	
Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	Not Listed.
Pennsylvania Right-To-Know:	[present]
Massachusetts Right-To Know:	Not Listed.
Florida substance List:	Not Listed.
Rhode Island Right-To-Know:	Flammable
Michigan critical materials register list:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed
Petroleum Residua	
Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	Not Listed.
Pennsylvania Right-To-Know:	Not Listed.
Massachusetts Right-To Know:	Not Listed.
Florida substance List:	Not Listed.
Rhode Island Right-To-Know:	Not Listed
Michigan critical materials register list:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed

Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed
Sulfur Compounds	
Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	Not Listed.
Pennsylvania Right-To-Know:	Not Listed.
Massachusetts Right-To Know:	Not Listed.
Florida substance List:	Not Listed.
Rhode Island Right-To-Know:	Not Listed
Michigan critical materials register list:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed
Naphthalene	
Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Listed
New Jersey Right-To-Know:	Listed
Pennsylvania Right-To-Know:	Listed
Massachusetts Right-To Know:	Listed
Florida substance List:	Not Listed.
Rhode Island Right-To-Know:	Listed
Michigan critical materials register list:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed
New Jersey - Environmental Hazardous Substances List:	Listed
Illinois - Toxic Air Contaminants	Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Listed
Hydrogen Sulfide	
Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	sn 1017
Pennsylvania Right-To-Know:	environmental hazard
Massachusetts Right-To Know:	Extraordinarily hazardous
Florida substance List:	Not Listed.
Rhode Island Right-To-Know:	Toxic, Flammable
Michigan critical materials register list:	Not Listed.

Massachusetts Extraordinarily Hazardous Substances:	extraordinarily hazardous
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	flammable - fourth degree
New Jersey - Environmental Hazardous Substances List:	SN 1017
Illinois - Toxic Air Contaminants:	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	= 100 lbs Air RQ = 100 lbs Land/Water RQ

Canadian Regulatory Information:

Canada DSL/NDSL Inventory: This product and/or its components are listed either on the Domestic Substances List (DSL) or are exempt.

Name	Canada - WHMIS: Classifications of Substances:	Canada - WHMIS: Ingredient Disclosure:
Diesel Oil	B3; D2B	
Naphthalene	B4, D2A	1 %
Hydrogen Sulfide	A; B1; D1A; D2B	1% (English Item 851, French Item 1550)

16. OTHER INFORMATION

Additional Information:

The pronounced and easily-recognized rotten egg odor of hydrogen sulfide gas (H₂S) can be detected at concentrations as low as 0.003-0.13 ppm. Since higher H₂S concentrations (100-200 ppm) cause olfactory fatigue and other hydrocarbon odors can "mask" H₂S, the sense of smell cannot be used as a reliable indicator of H₂S exposure.

Prepared by:

Craig M. Parker Manager, Toxicology And Product Safety

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