



SAFETY DATA SHEET

SDS ID NO.: 0137MAR019

Revision date 04/26/2021

1. IDENTIFICATION

Product Name Marathon Petroleum Anionic Emulsified Asphalt

Synonym Anionic Emulsified Asphalt; AE-F; AE-P; AE-NT; AE-PL; AE-T; AE-3; AE-60; AE-90; AE-90S; AE-150; AE-200; AE-300; AE-NT; EA-90; EA-150; EA-300; HFE-90; HFE-150; HFE-300; HFMS-2; HFP; HFRS-1; HFRS-2; HFRS-2P; MS-2; MS-3; MWS-90; MWS-150; MWS-300; PEA; PEP; RS-1; RS-2; RS-2L; RS-2P; RS-3; SS-1; SS-1H; SS-1HL; SS-1H LTT; SS-1HP; SS-1HSC; SS-1M; Acronal NX 4627X Asphalt Emulsion; HF Series; HFP Emulsified Asphalt; NTEA; Tack Coat; Non Track Tack; Marathon NTT- No Track Tack; Marathon NTTP - No Track Tack Polymerized; QST Emulsified Asphalt

Product code 0137MAR019

Chemical family Asphalt

Recommended use Road Building & Other Service.

Restrictions on use All others.

Manufacturer, Importer, or Responsible Party Name and Address
MARATHON PETROLEUM COMPANY LP
539 South Main Street
Findlay, OH 45840

SDS Information 1-419-421-3070 (M-F; 8-5 EST)

24 Hour Emergency Telephone CHEMTREC: 1-800-424-9300 (CCN# 13740)

2. HAZARD IDENTIFICATION

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Classification

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Carcinogenicity	Category 2
Reproductive toxicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 2
Chronic aquatic toxicity	Category 2

Hazards Not Otherwise Classified (HNOC)

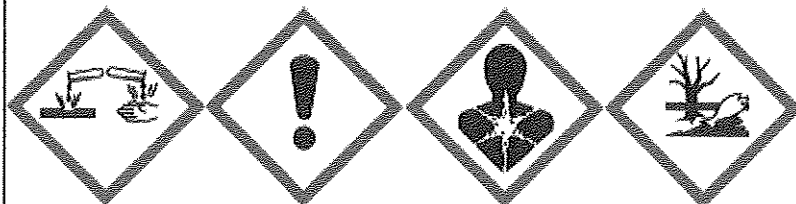
Hot liquid may cause thermal burns
May release hydrogen sulfide gas

Label Elements

Warning

Contact with product at elevated temperatures can result in thermal burns
May release highly toxic hydrogen sulfide gas that quickly fatigues the sense of smell
Causes skin irritation
Causes serious eye damage

May cause an allergic skin reaction.
 Suspected of causing cancer
 Suspected of damaging fertility or the unborn child
 May cause damage to organs (liver, spleen, bone marrow) through prolonged or repeated exposure
 Toxic to aquatic life with long lasting effects



Appearance Black-brown solid or semi-solid at room temperature. Liquid at temperatures >70°C.

Physical State Liquid

Odor Hydrocarbon / Tar

Precautionary Statements - Prevention

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Do not breathe dust/fume/gas/mist/vapors/spray
 Use only outdoors or in a well-ventilated area
 Wear protective gloves/protective clothing/eye protection/face protection
 Wash hands and any possibly exposed skin thoroughly after handling
 Contaminated work clothing should not be allowed out of the workplace
 Avoid release to the environment

Precautionary Statements - Response

IF exposed or concerned: Get medical attention
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 If eye irritation persists: Get medical attention
 If on skin: Wash with plenty of soap and water
 If skin irritation or rash occurs: Get medical attention
 Take off contaminated clothing and wash before reuse
 If inhaled: Remove person to fresh air and keep at rest in a position comfortable for breathing
 Call a poison center or doctor if you feel unwell
 Collect spillage

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container at an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is mixed with varying proportions of distillates and anionic emulsifiers. Composition will vary depending on the source of crude, emulsifiers, and specifications of the final product.

Composition Information

Name	CAS Number	% Concentration
Asphalt	8052-42-4	30-75
Distillates (petroleum), heavy catalytic cracked	64741-61-3	0-25
Fuels, diesel, no. 2	68476-34-6	0-15
Sulfur Compounds	Mixture	<5
Anionic Emulsifier	Mixture	<5

Naphthalene	91-20-3	<0.2
Sodium Borate	Proprietary	0-0.12
Fatty Amine Derivatives	Proprietary	0-0.12
Polycyclic Aromatic Hydrocarbons	Mixture	< 0.1
Hydrogen sulfide	7783-06-4	< 0.01

All concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume.

4. FIRST AID MEASURES

First aid measures

- General advice** In case of accident or if you feel unwell, seek medical advice immediately (show directions for use or safety data sheet if possible).
- Inhalation** If symptoms of overexposure to asphalt fume develop, move to fresh air in a position comfortable for breathing. If symptoms or irritation occur, call a poison control center or doctor.
- Skin contact**

Hot material: DO NOT DELAY. Immediately immerse or place the affected skin under a water stream for at least 15 minutes. Urgent medical attention is required for burns to the face, eyes, hands, feet, genitalia, and for circumferential or large burn areas. GET MEDICAL ATTENTION IMMEDIATELY.

Do not attempt to remove solidified asphalt if not a physician. Leave burn uncovered. Ice (or "cold packs") may be used in the event that water is unavailable. Only remove clothing if not adhering to the skin. Be aware that although it is very important to cool the burn thoroughly and completely, the overuse of ice may increase the risk of hypothermia.

Cold material: To remove cold asphalt not associated with a burn, wash with soap and water or waterless cleaner. If symptoms or irritation or rash occur, call a poison control center or doctor.
- Eye contact**

Hot material: After contact with hot asphalt, lay the person flat on their back, remove contact lenses if easy to do, and flush with water from a continuous stream for at least 15 minutes by allowing the water to flow over the bridge of the nose to the eyes. GET MEDICAL ATTENTION IMMEDIATELY.

Cold material: If irritation develops, flush eyes with water. If irritation or redness persists call a poison control center or a doctor.
- Ingestion** Ingestion not likely. Small amounts of ingested asphalt usually require no treatment. If large amounts are swallowed, call a poison control center or doctor.

Most important signs and symptoms, both short-term and delayed with overexposure

Adverse effects Frequent or prolonged contact with cold material may cause irritation. Additional effects may include skin sensitization. Exposure to hot melted material can cause thermal burns. Hydrogen sulfide can cause respiratory paralysis and death, depending on the concentration and duration of exposure. Do not rely on ability to smell vapors, since loss of smell rapidly occurs. Effects of overexposure include irritation of the nose and throat, nausea, vomiting, diarrhea, abdominal pain and signs of nervous system depression (e.g. headache, drowsiness, dizziness, loss of coordination and fatigue), irregular heartbeats, pulmonary edema, weakness and convulsions.

Indication of any immediate medical attention and special treatment needed

Notes to physician Immediately address any airway, breathing, or circulation concerns.

SKIN & EYE CONTACT: Prolonged flushing/cooling is necessary if the patient is treated on scene or soon after asphalt contact. Topical antibiotics should be liberally applied to the adhered asphalt-skin interface to aid in asphalt removal. A non-adherent material, such as

Adaptic®, can then be applied and covered with sterile gauze. If topical antibiotics are not available, other materials that may be effective include mineral oil, baby oil, petroleum jelly (e.g. Vaseline®), mayonnaise, or butter. Do not use organic solvents such as kerosene, gasoline, or ethanol, as these can result in tissue damage or a fire hazard. Dressings should be changed every 4 hours until natural separation occurs. Initiate standard burn management at that time. Once cooled, adhered asphalt is not harmful to the skin, and in fact, provides a sterile cover over the affected area. The asphalt will detach itself within a few days as healing occurs. If it is necessary to remove the asphalt, only medically approved solvents or warm paraffin should be used to prevent further skin damage. Circumferential asphalt contact can have a tourniquet effect and impair distal circulation and nerve function. Create a longitudinal split or cut (analogous to an escharotomy) may be required completely across the residual asphalt to relieve pressure in the underlying tissue. For eye exposures with adherent asphalt, consult with an ophthalmologist. If hot material has caused burns to the eye, early ophthalmologic evaluation is recommended.

INHALATION: Inhalation exposure can produce toxic effects. Treat intoxications as hydrogen sulfide exposures. At high concentrations hydrogen sulfide may produce pulmonary edema, respiratory depression, and/or respiratory paralysis. The first priority in treatment should be the establishment of adequate ventilation and the administration of 100% oxygen. Monitor for respiratory distress. If cough or difficulty in breathing develops, evaluate for upper respiratory tract inflammation, bronchitis, and pneumonitis.

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 fog can be used. For large fires, water spray, fog or foam (AFFF/ATC) can be used. Firefighting should be attempted only by those who are adequately trained and equipped with proper protective equipment.
Unsuitable extinguishing media	Do not use straight streams. Water contact can cause violent eruption of hot asphalt.
Specific hazards arising from the chemical	This product is not a combustible liquid per the OSHA Hazard Communication Standard, but will ignite and burn at temperatures exceeding the flash point. For additional fire related information, see NFPA 30 or the Emergency Response Guidebook 128.
Hazardous combustion products	Smoke, carbon monoxide, and other products of incomplete combustion.
Explosion data	
Sensitivity to mechanical impact:	No.
Sensitivity to static discharge:	No.
Special protective equipment and precautions for firefighters	Firefighters should wear full protective clothing and positive-pressure self-contained breathing apparatus (SCBA) with a full face-piece, as appropriate. Avoid using straight water streams. Water spray and foam must be applied carefully to avoid frothing and from as far a distance as possible. Avoid excessive water spray application. Keep run-off water out of sewers and water sources.
Additional firefighting tactics	Not applicable
NFPA	Health 2 Flammability 1 Instability 0 Special Hazard -

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Keep public away. Isolate and evacuate area. Shut off source if safe to do so.
Protective equipment	Use personal protection measures as recommended in Section 8.
Emergency procedures	Advise authorities and National Response Center (800-424-8802) if the product has

entered a water course or sewer. Notify local health and pollution control agencies, if appropriate.

Environmental precautions Avoid release to the environment. Avoid subsoil penetration.

Methods and materials for containment Contain liquid with sand or soil.

Methods and materials for cleaning up Use suitable absorbent materials such as vermiculite, sand, or clay to clean up residual liquids. Recover and return free product to proper containers.

7. HANDLING AND STORAGE

Safe handling precautions Avoid contact with skin, eyes and clothing. Avoid breathing fumes, gas, or vapors. Use only with adequate ventilation. Wash thoroughly after handling. Use good personal hygiene practices and wear appropriate personal protective equipment. Comply with all applicable EPA, OSHA, NFPA and consistent state and local requirements.

Harmful concentrations of hydrogen sulfide (H2S) gas can accumulate in excavations and low-lying areas as well as the vapor space of storage and bulk transport compartments. Stay upwind and vent open hatches before unloading. Sulfur containing products may cause polysulfide deposits (iron sulfide) to form inside iron storage tanks. These pyrophoric deposits, upon exposure to air, can ignite spontaneously. Keep heating coils and flues in storage tanks, trucks and kettles covered with product (8"). Do not overheat.

Storage conditions Store in properly closed containers that are appropriately labeled and in a cool, well-ventilated area.

Incompatible materials Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Name	ACGIH TLV	OSHA PELS	NIOSH IDLH
Asphalt 8052-42-4	0.5 mg/m ³ TWA	-	-
Fuels, diesel, no. 2 68476-34-6	100 mg/m ³ TWA Skin - potential significant contribution to overall exposure by the cutaneous route	-	-
Naphthalene 91-20-3	10 ppm TWA Skin - potential significant contribution to overall exposure by the cutaneous route	TWA: 10 ppm TWA: 50 mg/m ³	250 ppm
Sodium Borate Proprietary	2 mg/m ³ TWA 6 mg/m ³ STEL	-	-
Hydrogen sulfide 7783-06-4	1 ppm TWA 5 ppm STEL	Ceiling: 20 ppm Peak: 50 ppm	100 ppm

Notes: No further information available.

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

Personal protective equipment

Eye protection Wear goggles and faceshield when handling hot material.

Skin and body protection Wear insulated gloves when handling hot material. Contact the glove manufacturer for specific advice on glove selection and breakthrough times. Wear the appropriate thermal

resistant clothing and footwear when handling and applying hot asphalt. Rubberized suits or coats may be needed for some maintenance operations with hot material.

Respiratory protection

Where there is potential for airborne exposure to hydrogen sulfide (H₂S) above exposure limits, a NIOSH approved, self-contained breathing apparatus (SCBA) or equivalent operated in a pressure demand or other positive pressure mode should be used. When H₂S vapors exceed permissible limits, i.e., in confined spaces or bulk transport loading/unloading, a positive-pressure atmosphere supplying respirator is recommended. Self-contained breathing apparatus should be used for fire fighting.

Provided hydrogen sulfide (H₂S) is not detected: if there is potential to exceed the exposure limits for asphalt fumes a NIOSH certified air purifying respirator equipped with organic vapor cartridges/canisters with R or P95 filters should be used. A respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed when conditions warrant the use of a respirator.

Note: Air purifying respirators are not to be used in atmospheres that exceed the maximum use concentration (as directed by regulation or the manufacturer's instructions), in oxygen deficient atmospheres, (less than 19.5 percent oxygen) or under conditions that are immediately dangerous to life and health (IDLH).

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Black-brown solid or semi-solid at room temperature. Liquid at temperatures >70°C.
Physical State	Liquid
Color	Dark brown to black
Odor	Hydrocarbon / Tar
Odor Threshold	No data available.

<u>Property</u>	<u>Values (method)</u>
pH	Not applicable.
Melting Point / Freezing Point	No data available.
Initial Boiling Point / Boiling Range	> 100 °C / > 212 °F (ASTM D6997)
Flash Point	>93 °C / >200 °F
Evaporation Rate	No data available.
Flammability (solid, gas)	Not applicable.
Flammability Limit in Air (%):	
Upper Flammability Limit:	No data available.
Lower Flammability Limit:	No data available.
Explosion Limits	No data available.
Vapor Pressure	Negligible @ 25°C (ASTM D323)
Vapor Density	No data available.
Specific Gravity / Relative Density	0.95-1.05
Water Solubility	Negligible
Partition Coefficient	No data available.
Autoignition Temperature	No data available.
Decomposition Temperature	No data available.
Kinematic Viscosity	No data available.
VOC Content (%)	No data available.

10. STABILITY AND REACTIVITY

Reactivity	The product is non-reactive under normal conditions.
Chemical stability	Stable under recommended storage conditions.

Possibility of hazardous reactions	None under normal processing.
Hazardous polymerization	Will not occur.
Conditions to avoid	Sources of heat or ignition.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	None known under normal conditions of use.

11. TOXICOLOGICAL INFORMATION

Potential short-term adverse effects from overexposures

Inhalation	Fumes or vapors from the heated material may be irritating to the respiratory tract. May release highly toxic hydrogen sulfide gas that quickly fatigues the sense of smell.
Eye contact	Contact with eyes causes severe irritation. May cause eye damage. Vapors may cause eye irritation and sensitivity to light. Contact with hot material may cause thermal burns.
Skin contact	Irritating to skin. May cause an allergic skin reaction. Contact with hot material may cause thermal burns.
Ingestion	If swallowed at ambient temperature no significant adverse effects are expected. Ingestion of large amounts may cause gastrointestinal blockage. Swallowing hot material may cause burns to the mouth, throat, and stomach.

Acute toxicological data

Name	Oral LD50	Dermal LD50	Inhalation LC50
Asphalt 8052-42-4	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	>94.4 mg/m ³ (Rat) 4 h
Distillates (petroleum), heavy catalytic cracked 64741-61-3	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	4 mg/l (Rat) 4 h
Fuels, diesel, no. 2 68476-34-6	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	>1 - <5 mg/L (Rat) 4 h
Sulfur Compounds Mixture	-	-	> 5 mg/l (Rat) 4 h
Naphthalene 91-20-3	533 mg/kg (Mouse)	> 2000 mg/kg (Rabbit)	> 340 mg/m ³ (Rat) 1 h
Sodium Borate Proprietary	1200 mg/kg (Rat)	-	-
Hydrogen sulfide 7783-06-4	-	-	444 ppm (Rat) 4 h

Immediate and delayed effects as well as chronic effects from short and long-term exposure

PETROLEUM ASPHALT: Eye and upper respiratory tract irritation has been reported in some asphalt workers (paving and roofing operations) but they are typically mild and transient. Some studies indicate that asphalt paving workers may experience lower respiratory tract symptoms (e.g., coughing, wheezing, and shortness of breath) and pulmonary function changes. Other studies of asphalt workers found no consistent relationship between exposure to asphalt fumes and pulmonary function. Increased levels of 1-hydroxypyrene (a marker for exposure to polycyclic aromatic hydrocarbons) have been observed in the urine of asphalt workers. Genotoxicity studies (e.g., DNA adducts in the urine) of asphalt workers have been largely inconclusive.

A slight increase in lung cancer mortality was reported in a study of European workers exposed to paving and mastic asphalt, but conclusions were equivocal. A follow-up case-control epidemiology study of asphalt paving workers sponsored by the International Association for Research in Cancer (IARC) concluded that there was no evidence that asphalt exposure was linked to lung cancer. An increase in skin tumors was observed in lifetime studies of laboratory rodents exposed to extracts of asphalt (bitumen). The relevance of these studies to humans is not clear. No increase in skin tumors was observed in a lifetime bioassay where laboratory mice were treated with paving fume condensates. No increase in lung or other tumors were observed in a lifetime inhalation study in laboratory rats exposed to fumes from paving asphalt.

ASPHALTS USED IN ROOFING OPERATIONS: Some asphalts including roofing flux are further processed (oxidized/air-rectified) by the user or customer before use. An increased incidence of skin tumors was observed in a mouse skin carcinogenicity study where animals were exposed to condensed fumes collected from an oxidized roofing asphalt (BURA Type III) at above 450°F. Additional studies where mice were exposed to oxidized roofing asphalt fume condensates both as a tumor initiator and as a tumor promoter indicate that roofing fume condensate caused tumors as a result of initiation.

MIDDLE DISTILLATES, PETROLEUM: Petroleum middle distillates have produced skin tumors in mice after repeated and prolonged skin contact. Additional studies indicated prolonged skin irritation contributes to tumor development. Repeated dermal exposures to high concentrations in test animals resulted in reduced litter size and weight, and increased fetal resorptions at doses toxic to the mother. Inhalation exposure to high concentrations resulted in respiratory tract irritation, lung changes/infiltration/accumulation, and reduction in lung function. Repeated dermal application of petroleum gas oils resulted in decreased liver, thymus, and spleen weights, and altered bone marrow function. Microscopic alterations included liver hypertrophy and necrosis, decreased hematopoiesis and lymphocyte depletion. Altered mental state, drowsiness, peripheral motor neuropathy, irreversible brain damage (so-called Petrol Sniffer's Encephalopathy), delirium, seizures, and sudden death have been reported from repeated overexposure to some hydrocarbon solvents, naphthas, and gasoline.

NAPHTHALENE: Excessive exposure to naphthalene may cause nausea, vomiting, diarrhea, blood in the urine, and a yellow color to the skin. Lifetime inhalation exposure of laboratory rodents to naphthalene resulted in cancers of the respiratory tract in male and female rats. A small increase in cancer of the lung was observed in female mice, but no evidence of lung cancer was observed in male mice. Long-term exposure to excessive airborne naphthalene concentrations may result in destruction of red blood cells, a condition referred to as hemolytic anemia.

HYDROGEN SULFIDE: Hydrogen sulfide has a strong, unpleasant odor resembling that of rotten eggs. Odor, however, is not a reliable means for detecting potentially dangerous concentration of the gas, as the sense of smell diminishes very rapidly at concentrations of 50 ppm or higher. Eye irritation has been reported at 4 ppm. Irritation of the respiratory tract may occur at 50 ppm. Hydrogen sulfide gas may be fatal if inhaled in sufficient concentrations. Immediate loss of consciousness and death resulting from respiratory paralysis has occurred at concentrations as low as 500 ppm.

SODIUM BORATE: Acute overexposure to sodium borate has been associated with severe GI irritation and adverse hepatic and renal effects. Inflammation of the respiratory tract and eczema have been reported in workers overexposed to sodium borate dust. Chronic overexposure has also been associated with skin rashes, alopecia, and anemia. Testicular degeneration and sterility was observed in male laboratory rodents following subchronic drinking water and feeding studies, and in reproduction studies. Decreased ovulation was observed in female rats in reproduction studies. Adverse effects on the spleen and kidneys were also observed in subchronic laboratory animal studies. Findings from genotoxicity studies were negative.

POLYCYCLIC AROMATIC HYDROCARBONS: This product contains polycyclic aromatic hydrocarbons (PAH) at a level of >0.1%. Some PAH's that have been identified in this product such as benzo(a)pyrene, benz(a)anthracene and similar substances 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 PAH'. Since these kinds of PAHs 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 PAHs are probably carcinogenic to humans.

Adverse effects related to the physical, chemical and toxicological characteristics

Signs and symptoms	Frequent or prolonged contact with cold material may cause irritation. Rash. Contact with hot material may cause thermal burns. Hydrogen sulfide can cause respiratory paralysis and death, depending on the concentration and duration of exposure. Do not rely on ability to smell vapors, since loss of smell rapidly occurs. Effects of overexposure include irritation of the nose and throat, nausea, vomiting, diarrhea, abdominal pain and signs of nervous system depression (e.g. headache, drowsiness, dizziness, loss of coordination and fatigue), irregular heartbeats, pulmonary edema, weakness and convulsions.
Acute toxicity	None known.
Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes serious eye damage.
Sensitization	May cause an allergic skin reaction. Not expected to be a respiratory sensitizer.

Mutagenic effects None known.
Carcinogenicity Suspected of causing cancer.

Name	ACGIH (Class)	IARC (Class)	NTP	OSHA
Asphalt 8052-42-4	Not classifiable (A4)	Emissions of straight-run asphalt from paving operations - Possible human carcinogen (2B)	Not Listed	Not Listed
Fuels, diesel, no. 2 68476-34-6	Confirmed animal carcinogen (A3)	Not Classifiable (3)	Not Listed	Not Listed
Naphthalene 91-20-3	Confirmed animal carcinogen (A3)	Possible human carcinogen (2B)	Reasonably anticipated to be a human carcinogen	Not Listed
Polycyclic Aromatic Hydrocarbons Mixture	Suspected human carcinogen(A2)	Carcinogenic to humans (1)	Reasonably anticipated to be a human carcinogen	Not Listed

Reproductive toxicity Suspected of damaging fertility or the unborn child.
Specific Target Organ Toxicity (STOT) - single exposure None known.
Specific Target Organ Toxicity (STOT) - repeated exposure May cause damage to organs (liver, spleen, bone marrow) through prolonged or repeated exposure.
Aspiration hazard Potential for aspiration if swallowed.

12. ECOLOGICAL INFORMATION

Ecotoxicity This product should be considered toxic to aquatic organisms, with the potential to cause long lasting adverse effects in the aquatic environment.

Name	Fish	Crustacea	Algae/aquatic plants
Distillates (petroleum), heavy catalytic cracked 64741-61-3	96-hr LC50 = 48 mg/L Zebrafish	-	72-hr EL50 < 1 mg/L Algae
Fuels, diesel, no. 2 68476-34-6	96-hr LC50 = 35 mg/l Fathead minnow (flow-through)	48-hr EL50 = 6.4 mg/l Daphnia magna	-
Naphthalene 91-20-3	96-hr LC50 = 0.91-2.82 mg/l Rainbow trout (static) 96-hr LC50 = 1.99 mg/l Fathead minnow (static)	48-hr LC50 = 1.6 mg/l Daphnia magna	-
Sodium Borate Proprietary	96-hr LC50 = 3600 ppm Gambusia affinis	48-hr LC50 = 141 mg/l Daphnia magna	96-hr EC50 = 15.4 mg/l Pseudokirchneriella subcapitata
Hydrogen sulfide 7783-06-4	96-hr LC50 = 0.016 mg/l Fathead minnow 96-hr LC50 = 0.013 mg/l Rainbow trout	-	-

Persistence and degradability Not expected to be readily biodegradable.
Bioaccumulation Not expected to bioaccumulate in aquatic organisms.
Mobility in soil Not likely to move rapidly with surface or groundwater flows because of its low water solubility.
Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Description of waste residues	No information available.
Safe handling of wastes	Handle in accordance with applicable local, state, and federal regulations. Use personal protection measures as required.
Disposal of wastes / methods of disposal	The user is responsible for determining if any discarded material is a hazardous waste (40 CFR 262.11). Dispose of in accordance with federal, state and local regulations.
Contaminated packaging disposal	Empty containers should be completely drained and then discarded or recycled, if possible. Dispose of in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

DOT

UN/Identification No:	Not applicable
UN Proper Shipping Name:	Not Regulated
Transport Hazard Class(es):	Not applicable
Packing Group:	Not applicable

IATA

UN/Identification No:	UN 3082
UN Proper Shipping Name:	Environmentally Hazardous Substance, Liquid, N.O.S. (petroleum distillates)
Transport Hazard Class(es):	9
Packing Group:	III

IMDG

UN/Identification No:	UN 3082
UN Proper Shipping Name:	Environmentally Hazardous Substance, Liquid, N.O.S. (petroleum distillates)
Transport Hazard Class(es):	9
Packing Group:	III
EmS No:	F-A ,S-F
Marine Pollutant:	Yes

15. REGULATORY INFORMATION

Regulatory Information

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

EPA Superfund Amendment & Reauthorization Act (SARA)

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

Name	CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs
Hydrogen sulfide	500

SARA Section 304 This product may contain 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	Hazardous Substances RQs
Naphthalene 91-20-3	100 lb 45.4 kg
Polycyclic Aromatic Hydrocarbons Mixture	1 lb 0.454 kg
Hydrogen sulfide 7783-06-4	100 lb 45.4 kg

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

- Skin corrosion or irritation
- Serious eye damage or eye irritation
- Respiratory or Skin sensitization
- Carcinogenicity
- Reproductive toxicity
- Specific target organ toxicity
- Hazard Not Otherwise Classified (HNOC)-Health

SARA Section 313 This product may contain component(s), which if in exceedance of the de minimus threshold, may be subject to the reporting requirements of SARA Title III Section 313 Toxic Release Reporting (Form R).

Name	CERCLA/SARA 313 Emission reporting
Asphalt 8052-42-4	0.1 % Supplier notification limit
Naphthalene 91-20-3	0.1 % de minimis concentration
Polycyclic Aromatic Hydrocarbons Mixture	0.1 % Supplier notification limit
Hydrogen sulfide 7783-06-4	1.0 % de minimis concentration
Surfactants Proprietary	1.0 % de minimis concentration

U.S. State Regulations

California Proposition 65 This product can expose you to chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm.

Name	California Proposition 65
Naphthalene 91-20-3	Carcinogen, initial date 04/19/2002
Polycyclic Aromatic Hydrocarbons Mixture	Carcinogen, initial date 07/01/1987
4-Vinylcyclohexene 100-40-3	Carcinogen, initial date 05/01/1996
1,4-dioxane 123-91-1	Female reproductive toxicity, initial date 08/07/2009 Carcinogen, initial date 01/01/1988
Ethylene Oxide 75-21-8	Carcinogen, initial date 07/01/1987 Developmental toxicity, initial date 08/07/2009 Reproductive toxicity, initial date (female) 02/27/1987 - (male) 08/07/2009

For more information, go to www.P65Warnings.ca.gov.

State Right-To-Know Regulations The following component(s) of this material are identified on the regulatory lists below:

Name	New Jersey Right-To-Know	Pennsylvania Right-To-Know	Massachusetts Right-To-Know
Asphalt 8052-42-4	Listed	Listed	Listed

Fuels, diesel, no. 2 68476-34-6	Listed	Listed	Not Listed
Sulfur Compounds Mixture	Listed	Listed	Listed
Naphthalene 91-20-3	Listed	Listed	Listed
Sodium Borate Proprietary	Listed	Listed	Listed
Polycyclic Aromatic Hydrocarbons Mixture	Listed	Listed	Listed
Hydrogen sulfide 7783-06-4	Listed	Listed	Listed

16. OTHER INFORMATION

Prepared by Toxicology & Product Safety

Revision Notes

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Disclaimer

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