

1. Identification

Product identifier Medium Curing Cutback Asphalt, MC Asphalt
Other means of identification
SDS number MC2014001
Recommended use Industrial use.
Recommended restrictions None known.
Manufacturer/Importer/Supplier/Distributor information
Company name Asphalt & Fuel Supply
Address 4200 E. Skelly Drive, STE 600
Tulsa, OK 74135
United States
Telephone 918-488-1339
E-mail matt@asphalt-fuelsupply.com
Contact person Matt Roberts
Emergency telephone CHEMTREC: 1-800-424-9300 (access CCN632693)

2. Hazard(s) identification

Physical hazards Not classified.
Health hazards
Acute toxicity, inhalation Category 4
Skin corrosion/irritation Category 2
Sensitization, skin Category 1
Germ cell mutagenicity Category 1B
Carcinogenicity Category 1A
Reproductive toxicity Category 1B
Specific target organ toxicity, repeated exposure Category 1 (Adrenal gland, Bone marrow, Kidney, Liver, Lymph node, Stomach, Thymus)
Environmental hazards
Hazardous to the aquatic environment, acute hazard Category 1
Hazardous to the aquatic environment, long-term hazard Category 1
OSHA defined hazards Not classified.

Label elements

Signal word Danger
Hazard statement Harmful if inhaled. Causes skin irritation. May cause an allergic skin reaction. May cause genetic defects. May cause cancer. May damage fertility or the unborn child. Causes damage to organs (Adrenal gland, Bone marrow, Kidney, Liver, Lymph node, Stomach, Thymus) through prolonged or repeated exposure. Very toxic to aquatic life with long lasting effects.
Precautionary statement
Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist/vapors. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. Avoid release to the environment.

Response	If exposed or concerned: Get medical advice/attention. If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. Collect spillage.
Storage	Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Asphalt	8052-42-4	50 - 85
Distillates (petroleum), light hydrocracked	64741-77-1	0 - 50
Distillates (petroleum), petroleum residues vacuum	68955-27-1	0 - 45
Distillates (petroleum), heavy naphthenic	64741-53-3	0 - 15
Light cycle oil	64741-59-9	0 - 15
Light naphthenic distillate (petroleum)	64741-52-2	0 - 15
Polycyclic aromatic hydrocarbons	130498-29-2	1.5
Toluene	108-88-3	0 - 1
Xylene	1330-20-7	0 - 1
Ethylbenzene	100-41-4	0 - 0.5
Hydrogen sulfide	7783-06-4	0 - 0.3
Benzene	71-43-2	0 - 0.2
Naphthalene	91-20-3	0 - 0.2

Composition comments Dangerous amounts of hydrogen sulfide, a highly toxic gas, may be present, especially in the headspace of containers. All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Call a poison center or doctor/physician if you feel unwell.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse. If hot product contacts skin, cool under running water and get medical attention.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists. If hot product contacts eye, flush with water for at least 15 minutes and seek medical attention immediately.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed	In case of inhalation of fumes from heated product: Irritation of nose and throat. Coughing. Shortness of breath. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash. Edema. Jaundice. Direct contact with eyes may cause temporary irritation. Hydrogen sulfide, a highly toxic gas, may be present. Signs and symptoms of overexposure to hydrogen sulfide include respiratory and eye irritation, dizziness, nausea, coughing, a sensation of dryness and pain in the nose, and loss of consciousness. Odor does not provide a reliable indicator of the presence of hazardous levels in the atmosphere. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital.
General information	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk. Cool containers exposed to flames with water until well after the fire is out. Collect runoff for recycling or disposal as potential hazardous waste.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Material will burn in a fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Ventilate closed spaces before entering them. Before entering storage tanks and commencing any operation in a confined area, check the atmosphere for oxygen content, hydrogen sulfide (H ₂ S) and flammability. Avoid contact with hot or molten material. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist/vapors. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	<p>Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Collect runoff for disposal as potential hazardous waste.</p> <p>Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.</p> <p>Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.</p>
Environmental precautions	Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with hot or molten material. When petroleum asphalt products are heated, potentially irritating emissions (fumes, mists, and vapors) may be released. Hydrogen sulfide (H ₂ S) may be given off when this material is heated. Do not depend on sense of smell for warning. Do not breathe mist/vapors. Tripping incidences have occurred because of asphalt buildup on bottoms of shoes and boots; buildup should be removed regularly to prevent such incidences. Avoid prolonged exposure. Persons susceptible to allergic reactions should not handle this product. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.
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Conditions for safe storage, including any incompatibilities

Store locked up. Store in tightly closed container. Store in a well-ventilated place. The pressure in sealed containers can increase under the influence of heat. Vapors containing hydrogen sulfide may accumulate during storage or transport of asphaltic materials. Before entering storage tanks and commencing any operation in a confined area, check the atmosphere for oxygen content, hydrogen sulfide (H₂S) and flammability. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection**Occupational exposure limits****US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Components	Type	Value
Benzene (CAS 71-43-2)	STEL	5 ppm
	TWA	1 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Distillates (petroleum), heavy naphthenic (CAS 64741-53-3)	PEL	5 mg/m ³	Mist.
Ethylbenzene (CAS 100-41-4)	PEL	435 mg/m ³	
		100 ppm	
Light cycle oil (CAS 64741-59-9)	PEL	400 mg/m ³	
		100 ppm	
Light naphthenic distillate (petroleum) (CAS 64741-52-2)	PEL	5 mg/m ³	Mist.
Naphthalene (CAS 91-20-3)	PEL	50 mg/m ³	
		10 ppm	
Xylene (CAS 1330-20-7)	PEL	435 mg/m ³	
		100 ppm	

US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value
Benzene (CAS 71-43-2)	Ceiling	25 ppm
	TWA	10 ppm
Hydrogen sulfide (CAS 7783-06-4)	Ceiling	20 ppm
Toluene (CAS 108-88-3)	Ceiling	300 ppm
	TWA	200 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Asphalt (CAS 8052-42-4)	TWA	0.5 mg/m ³	Inhalable fume.
Benzene (CAS 71-43-2)	STEL	2.5 ppm	
	TWA	0.5 ppm	
Ethylbenzene (CAS 100-41-4)	TWA	20 ppm	
Hydrogen sulfide (CAS 7783-06-4)	STEL	5 ppm	
	TWA	1 ppm	
Light cycle oil (CAS 64741-59-9)	TWA	5 mg/m ³	Inhalable fraction.
Naphthalene (CAS 91-20-3)	TWA	10 ppm	
Toluene (CAS 108-88-3)	TWA	20 ppm	
Xylene (CAS 1330-20-7)	STEL	150 ppm	

**US. ACGIH Threshold Limit Values
Components**

Type	Value	Form
TWA	100 ppm	

**US. NIOSH: Pocket Guide to Chemical Hazards
Components**

Components	Type	Value	Form
Asphalt (CAS 8052-42-4)	Ceiling	5 mg/m ³	Fume.
Benzene (CAS 71-43-2)	STEL	1 ppm	
	TWA	0.1 ppm	
Distillates (petroleum), heavy naphthenic (CAS 64741-53-3)	STEL	10 mg/m ³	Mist.
	TWA	5 mg/m ³	Mist.
Ethylbenzene (CAS 100-41-4)	STEL	545 mg/m ³	
		125 ppm	
	TWA	435 mg/m ³	
		100 ppm	
Hydrogen sulfide (CAS 7783-06-4)	Ceiling	15 mg/m ³	
		10 ppm	
Light naphthenic distillate (petroleum) (CAS 64741-52-2)	STEL	10 mg/m ³	Mist.
	TWA	5 mg/m ³	Mist.
Naphthalene (CAS 91-20-3)	STEL	75 mg/m ³	
		15 ppm	
	TWA	50 mg/m ³	
		10 ppm	
Toluene (CAS 108-88-3)	STEL	560 mg/m ³	
		150 ppm	
	TWA	375 mg/m ³	
		100 ppm	
Xylene (CAS 1330-20-7)	STEL	655 mg/m ³	
		150 ppm	
	TWA	435 mg/m ³	
		100 ppm	

Biological limit values

ACGIH

Components	Value	Determinant	Specimen	Sampling Time
Benzene (CAS 71-43-2)	500 µg/g	t,t-Muconic acid	Creatinine in urine	*

**ACGIH Biological Exposure Indices
Components**

Components	Value	Determinant	Specimen	Sampling Time
Benzene (CAS 71-43-2)	25 µg/g	S-Phenylmercapturic acid	Creatinine in urine	*
Ethylbenzene (CAS 100-41-4)	0.15 g/g	Sum of mandelic acid and phenylglyoxylic acid	Creatinine in urine	*

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Naphthalene (CAS 91-20-3)	2.5 µg/l	1-Hydroxypyrene, with hydrolysis (1-HP)	Urine	*
Polycyclic aromatic hydrocarbons (CAS 130498-29-2)	2.5 µg/l	1-Hydroxypyrene, with hydrolysis (1-HP)	Urine	*
Toluene (CAS 108-88-3)	0.3 mg/g	o-Cresol, with hydrolysis	Creatinine in urine	*
	0.03 mg/l	Toluene	Urine	*
	0.02 mg/l	Toluene	Blood	*
Xylene (CAS 1330-20-7)	1.5 g/g	Methylhippuric acids	Creatinine in urine	*

* - For sampling details, please see the source document.

Exposure guidelines**US - California OELs: Skin designation**

Benzene (CAS 71-43-2)	Can be absorbed through the skin.
Naphthalene (CAS 91-20-3)	Can be absorbed through the skin.
Toluene (CAS 108-88-3)	Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

Toluene (CAS 108-88-3)	Skin designation applies.
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US ACGIH Threshold Limit Values: Skin designation

Benzene (CAS 71-43-2)	Can be absorbed through the skin.
Naphthalene (CAS 91-20-3)	Can be absorbed through the skin.

Appropriate engineering controls

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide easy access to water supply or an emergency shower.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles). Wear a full-face respirator, if needed.

Skin protection

Hand protection Wear appropriate chemical resistant gloves. When handling hot material, use heat resistant gloves. Suitable gloves can be recommended by the glove supplier.

Skin protection

Other Wear appropriate chemical resistant clothing. Thermally protective apron and long sleeves are recommended when volume of hot material is significant.

Respiratory protection

Wear approved respiratory protection when working with this material unless ventilation or other engineering controls are adequate to keep airborne concentrations below recommended exposure standards. Follow respirator protection program requirements (OSHA 1910.134 or CSA-Z94.4-02(R2008), and ANSI / AIHA Z88.6) for all respirator use. Note: If any of the applicable hydrogen sulfide standards are likely to be exceeded, positive pressure supplied-air respiratory protection must be used.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Observe any medical surveillance requirements. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties**Appearance**

Physical state	Liquid.
Form	Thick, oily liquid.
Color	Black or dark brown.

Odor	Hydrocarbon odor.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	600 °F (315.6 °C)
Flash point	225.0 °F (107.2 °C)
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	0.8 - 1.5 (H ₂ O=1)
Solubility(ies)	
Solubility (water)	Insoluble.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	750 °F (398.89 °C)
Decomposition temperature	Not available.
Viscosity	100 - 400 cSt
Viscosity temperature	122 °F (50 °C)
Other information	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Stable under normal temperature conditions and recommended use.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Thermal decomposition may produce smoke, oxides of carbon and lower molecular weight organic compounds whose composition have not been characterized. Hydrogen sulfide. Sulfur oxides. Nitrogen oxides. Hydrocarbons.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Harmful if inhaled. At elevated temperatures, vapor may cause irritation of respiratory tract.
Skin contact	Causes skin irritation. May cause an allergic skin reaction. Contact with hot product may cause severe burns.
Eye contact	Direct contact with eyes may cause temporary irritation. Contact with hot product may cause severe burns.
Ingestion	Ingestion may cause irritation and malaise. Contact with hot material can cause thermal burns which may result in permanent damage.

Symptoms related to the physical, chemical and toxicological characteristics

In case of inhalation of fumes from heated product: Irritation of nose and throat. Coughing. Shortness of breath. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash. Edema. Jaundice. Direct contact with eyes may cause temporary irritation. Hydrogen sulfide, a highly toxic gas, may be present. Signs and symptoms of overexposure to hydrogen sulfide include respiratory and eye irritation, dizziness, nausea, coughing, a sensation of dryness and pain in the nose, and loss of consciousness. Odor does not provide a reliable indicator of the presence of hazardous levels in the atmosphere. Prolonged exposure may cause chronic effects.

Information on toxicological effects

Acute toxicity Harmful if inhaled.

Components	Species	Test Results
Benzene (CAS 71-43-2)		
Acute		
Oral		
LD50	Rat	930 mg/kg
Ethylbenzene (CAS 100-41-4)		
Acute		
Dermal		
LD50	Rabbit	15400 mg/kg
Inhalation		
LC50	Rat	17.4 mg/l, 4 hours
Oral		
LD50	Rat	3500 - 4700 mg/kg
Hydrogen sulfide (CAS 7783-06-4)		
Acute		
Inhalation		
<i>Gas</i>		
LC50	Rat	444 ppm, 4 Hours
Light cycle oil (CAS 64741-59-9)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Inhalation		
<i>Mist</i>		
LC50	Rat	4.7 mg/l, 4 Hours
Oral		
LD50	Rat	3200 mg/kg
Naphthalene (CAS 91-20-3)		
Acute		
Dermal		
LD50	Rabbit	> 2 g/kg
Oral		
LD50	Rat	490 mg/kg
Toluene (CAS 108-88-3)		
Acute		
Dermal		
LD50	Rabbit	12200 mg/kg
Inhalation		
<i>Vapor</i>		
LC50	Rat	28.1 mg/l, 4 Hours

Components	Species	Test Results
Xylene (CAS 1330-20-7)		
Acute		
Oral		
LD50	Rat	3523 mg/kg
Skin corrosion/irritation	Causes skin irritation.	
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.	
Respiratory or skin sensitization		
Respiratory sensitization	Not a respiratory sensitizer.	
Skin sensitization	May cause an allergic skin reaction.	
Germ cell mutagenicity	May cause genetic defects.	
Carcinogenicity	May cause cancer.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
Asphalt (CAS 8052-42-4)		2B Possibly carcinogenic to humans.
Benzene (CAS 71-43-2)		1 Carcinogenic to humans.
Distillates (petroleum), heavy naphthenic (CAS 64741-53-3)		1 Carcinogenic to humans.
Distillates (petroleum), light hydrocracked (CAS 64741-77-1)		3 Not classifiable as to carcinogenicity to humans.
Distillates (petroleum), petroleum residues vacuum (CAS 68955-27-1)		2B Possibly carcinogenic to humans.
Ethylbenzene (CAS 100-41-4)		2B Possibly carcinogenic to humans.
Light cycle oil (CAS 64741-59-9)		3 Not classifiable as to carcinogenicity to humans.
Light naphthenic distillate (petroleum) (CAS 64741-52-2)		1 Carcinogenic to humans.
Naphthalene (CAS 91-20-3)		2B Possibly carcinogenic to humans.
Toluene (CAS 108-88-3)		3 Not classifiable as to carcinogenicity to humans.
Xylene (CAS 1330-20-7)		3 Not classifiable as to carcinogenicity to humans.
NTP Report on Carcinogens		
Benzene (CAS 71-43-2)		Known To Be Human Carcinogen.
Distillates (petroleum), heavy naphthenic (CAS 64741-53-3)		Known To Be Human Carcinogen.
Distillates (petroleum), light hydrocracked (CAS 64741-77-1)		Known To Be Human Carcinogen.
Light cycle oil (CAS 64741-59-9)		Known To Be Human Carcinogen.
Light naphthenic distillate (petroleum) (CAS 64741-52-2)		Known To Be Human Carcinogen.
Naphthalene (CAS 91-20-3)		Reasonably Anticipated to be a Human Carcinogen.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)		
Benzene (CAS 71-43-2)		Cancer
Reproductive toxicity	May damage fertility or the unborn child.	
Specific target organ toxicity - single exposure	Not classified.	
Specific target organ toxicity - repeated exposure	Causes damage to organs (Adrenal gland, Bone marrow, Kidney, Liver, Lymph node, Stomach, Thymus) through prolonged or repeated exposure.	
Aspiration hazard	Not an aspiration hazard.	
Chronic effects	Prolonged inhalation may be harmful. Causes damage to organs through prolonged or repeated exposure. Prolonged exposure may cause chronic effects.	

12. Ecological information

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Components	Species	Test Results
Distillates (petroleum), light hydrocracked (CAS 64741-77-1)		
Aquatic		
Fish	EC50	Fish
		7.3 mg/l, 96 Hours

Components	Species	Test Results
Ethylbenzene (CAS 100-41-4)		
Aquatic		
<i>Acute</i>		
Crustacea	EC50	Water flea (Daphnia magna) 1.81 - 2.38 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss) 4.2 mg/l, 96 hours
<i>Chronic</i>		
Crustacea	EC50	Ceriodaphnia dubia 3.6 mg/l, 7 days
Hydrogen sulfide (CAS 7783-06-4)		
Aquatic		
<i>Acute</i>		
Crustacea	EC50	Crustacea 0.042 mg/l, 48 Hours
Fish	LC50	Fathead minnow (Pimephales promelas) 0.0243 mg/l, 96 hours
Light cycle oil (CAS 64741-59-9)		
Aquatic		
<i>Acute</i>		
Crustacea	EC50	Daphnia magna 0.45 mg/l, 48 Hours
Fish	LC50	Oncorhynchus mykiss > 0.21 mg/l, 96 Hours
<i>Chronic</i>		
Crustacea	EC50	Daphnia magna 0.18 mg/l, 21 days
Naphthalene (CAS 91-20-3)		
Aquatic		
Crustacea	EC50	Water flea (Daphnia magna) 1.09 - 3.4 mg/l, 48 hours
Fish	LC50	Pink salmon (Oncorhynchus gorbuscha) 0.95 - 1.62 mg/l, 96 hours
Toluene (CAS 108-88-3)		
Aquatic		
<i>Acute</i>		
Crustacea	EC50	Daphnia magna 11.5 mg/l, 48 hours
Fish	LC50	Oncorhynchus kisutch 5.5 mg/l, 96 hours
<i>Chronic</i>		
Crustacea	NOEC	Ceriodaphnia dubia 0.74 mg/l, 7 days
Fish	NOEC	Oncorhynchus kisutch 1.4 mg/l, 40 days
Xylene (CAS 1330-20-7)		
Aquatic		
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss) 2.6 mg/l, 96 hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

Benzene (CAS 71-43-2)	2.13
Ethylbenzene (CAS 100-41-4)	3.15
Toluene (CAS 108-88-3)	2.73
Xylene (CAS 1330-20-7)	3.12 - 3.2

Mobility in soil The product is insoluble in water.

Other adverse effects This product contains one or more substances identified as hazardous air pollutants (HAPs) per the US Federal Clean Air Act (see section 15).

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number	UN3082
UN proper shipping name	Environmentally hazardous substances, liquid, n.o.s. (Clarified oils (petroleum), catalytic cracked)
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Label(s)	9
Packing group	III
Environmental hazards	
Marine pollutant	Yes
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	8, 146, 335, IB3, T4, TP1, TP29
Packaging exceptions	155
Packaging non bulk	203
Packaging bulk	241

IATA

UN number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (Clarified oils (petroleum), catalytic cracked)
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Label(s)	9
Packing group	III
Environmental hazards	Yes
ERG Code	9L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CLARIFIED OILS (PETROLEUM), CATALYTIC CRACKED)
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Packing group	III
Environmental hazards	
Marine pollutant	Yes
EmS	F-A, S-F
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Asphalt (CAS 8052-42-4)	Listed.
Benzene (CAS 71-43-2)	Listed.

Ethylbenzene (CAS 100-41-4)	Listed.
Hydrogen sulfide (CAS 7783-06-4)	Listed.
Naphthalene (CAS 91-20-3)	Listed.
Toluene (CAS 108-88-3)	Listed.
Xylene (CAS 1330-20-7)	Listed.

SARA 304 Emergency release notification

HYDROGEN SULFIDE (CAS 7783-06-4) 100 LBS

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Benzene (CAS 71-43-2)
 Cancer
 Central nervous system
 Blood
 Aspiration
 Skin
 Eye
 respiratory tract irritation
 Flammability

Toxic Substances Control Act (TSCA) One or more components of the mixture are not on the TSCA 8(b) inventory or are designated "inactive".

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity (pounds)	Threshold planning quantity (pounds)	Threshold planning quantity, lower value (pounds)	Threshold planning quantity, upper value (pounds)
Hydrogen sulfide	7783-06-4	100	500		

SARA 311/312 Hazardous chemical Yes

Classified hazard categories
 Acute toxicity (any route of exposure)
 Skin corrosion or irritation
 Respiratory or skin sensitization
 Germ cell mutagenicity
 Carcinogenicity
 Reproductive toxicity
 Specific target organ toxicity (single or repeated exposure)

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Benzene	71-43-2	0 - 0.2
Ethylbenzene	100-41-4	0 - 0.5
Naphthalene	91-20-3	0 - 0.2
Polycyclic aromatic hydrocarbons	130498-29-2	1.5
Toluene	108-88-3	0 - 1
Xylene	1330-20-7	0 - 1

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Benzene (CAS 71-43-2)
 Ethylbenzene (CAS 100-41-4)
 Naphthalene (CAS 91-20-3)
 Polycyclic aromatic hydrocarbons (CAS 130498-29-2)
 Toluene (CAS 108-88-3)
 Xylene (CAS 1330-20-7)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Hydrogen sulfide (CAS 7783-06-4)

Safe Drinking Water Act (SDWA) Contains component(s) regulated under the Safe Drinking Water Act.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Toluene (CAS 108-88-3) 6594

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Toluene (CAS 108-88-3) 35 %WV

DEA Exempt Chemical Mixtures Code Number

Toluene (CAS 108-88-3)

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FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Hydrogen sulfide (CAS 7783-06-4)

High priority

US state regulations**US. Massachusetts RTK - Substance List**

Asphalt (CAS 8052-42-4)

Benzene (CAS 71-43-2)

Distillates (petroleum), heavy naphthenic (CAS 64741-53-3)

Ethylbenzene (CAS 100-41-4)

Hydrogen sulfide (CAS 7783-06-4)

Light cycle oil (CAS 64741-59-9)

Light naphthenic distillate (petroleum) (CAS 64741-52-2)

Naphthalene (CAS 91-20-3)

Toluene (CAS 108-88-3)

Xylene (CAS 1330-20-7)

US. New Jersey Worker and Community Right-to-Know Act

Asphalt (CAS 8052-42-4)

Benzene (CAS 71-43-2)

Distillates (petroleum), petroleum residues vacuum (CAS 68955-27-1)

Ethylbenzene (CAS 100-41-4)

Hydrogen sulfide (CAS 7783-06-4)

Light cycle oil (CAS 64741-59-9)

Naphthalene (CAS 91-20-3)

Polycyclic aromatic hydrocarbons (CAS 130498-29-2)

Toluene (CAS 108-88-3)

Xylene (CAS 1330-20-7)

US. Pennsylvania Worker and Community Right-to-Know Law

Asphalt (CAS 8052-42-4)

Benzene (CAS 71-43-2)

Distillates (petroleum), heavy naphthenic (CAS 64741-53-3)

Ethylbenzene (CAS 100-41-4)

Hydrogen sulfide (CAS 7783-06-4)

Light cycle oil (CAS 64741-59-9)

Light naphthenic distillate (petroleum) (CAS 64741-52-2)

Naphthalene (CAS 91-20-3)

Polycyclic aromatic hydrocarbons (CAS 130498-29-2)

Toluene (CAS 108-88-3)

Xylene (CAS 1330-20-7)

US. Rhode Island RTK

Asphalt (CAS 8052-42-4)

Benzene (CAS 71-43-2)

Distillates (petroleum), heavy naphthenic (CAS 64741-53-3)

Ethylbenzene (CAS 100-41-4)

Hydrogen sulfide (CAS 7783-06-4)

Light cycle oil (CAS 64741-59-9)

Light naphthenic distillate (petroleum) (CAS 64741-52-2)

Naphthalene (CAS 91-20-3)

Toluene (CAS 108-88-3)

Xylene (CAS 1330-20-7)

California Proposition 65

WARNING: This product can expose you to chemicals including Benzene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

California Proposition 65 - CRT: Listed date/Carcinogenic substance

Asphalt (CAS 8052-42-4)

Listed: January 1, 1990

Benzene (CAS 71-43-2)

Listed: February 27, 1987

Ethylbenzene (CAS 100-41-4)

Listed: June 11, 2004

Naphthalene (CAS 91-20-3)

Listed: April 19, 2002

California Proposition 65 - CRT: Listed date/Developmental toxin

Benzene (CAS 71-43-2)

Listed: December 26, 1997

Toluene (CAS 108-88-3)

Listed: January 1, 1991

California Proposition 65 - CRT: Listed date/Male reproductive toxin

Benzene (CAS 71-43-2)

Listed: December 26, 1997

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Asphalt (CAS 8052-42-4)

Benzene (CAS 71-43-2)

Distillates (petroleum), heavy naphthenic (CAS 64741-53-3)

Distillates (petroleum), light hydrocracked (CAS 64741-77-1)

Distillates (petroleum), petroleum residues vacuum (CAS 68955-27-1)

Ethylbenzene (CAS 100-41-4)

Hydrogen sulfide (CAS 7783-06-4)

Light cycle oil (CAS 64741-59-9)

Light naphthenic distillate (petroleum) (CAS 64741-52-2)

Naphthalene (CAS 91-20-3)

Polycyclic aromatic hydrocarbons (CAS 130498-29-2)

Toluene (CAS 108-88-3)

Xylene (CAS 1330-20-7)

16. Other information, including date of preparation or last revision

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Version # 02
NFPA ratings



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