



SAFETY DATA SHEET

1. Identification

Product identifier	MC Cutback Asphalt
Other means of identification	
SDS number	211-GHS
Synonyms	MC-30, MC-70, MC-250, MC-800, MC-3000, Medium Cure Asphalt, Cutback Asphalt, Road Asphalt, Road Oil
Recommended use	Asphalt products are to be used as road and highway paving applications; waterproofing and sealing applications; coatings; or other engineering applications. Use in other applications may result in higher exposures and require additional engineering controls and personal protective equipment.
Recommended restrictions	No other uses are advised.
Manufacturer/Importer/Supplier/Distributor information	
Manufacturer/Supplier	Valero Marketing & Supply Company and Affiliates One Valero Way San Antonio, TX 78269-6000
General Assistance	210-345-4593
E-Mail	CorpHSE@valero.com
Contact Person	Industrial Hygienist
Emergency Telephone	24 Hour Emergency 866-565-5220 1-800-424-9300 (CHEMTREC USA)

2. Hazard(s) identification

Physical hazards	Flammable liquids	Category 3
Health hazards	Acute toxicity, inhalation	Category 4
	Skin corrosion/irritation	Category 2
	Germ cell mutagenicity	Category 1B
	Carcinogenicity	Category 1A
	Reproductive toxicity	Category 2
	Specific target organ toxicity, repeated exposure	Category 1 (Adrenal gland, Bone marrow, Kidney, Liver, Lymph node, Stomach, Thymus)
	Aspiration hazard	Category 1
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 2
	Hazardous to the aquatic environment, long-term hazard	Category 2
OSHA defined hazards	Not classified.	

Label elements



Signal word

Danger

Hazard statement

Flammable liquid and vapor. May be fatal if swallowed and enters airways. Causes skin irritation. Harmful if inhaled. May cause genetic defects. May cause cancer. Suspected of damaging fertility or the unborn child. Causes damage to organs (Adrenal gland, Bone marrow, Kidney, Liver, Lymph node, Stomach, Thymus) through prolonged or repeated exposure. 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. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. 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. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

Response

If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If exposed or concerned: Get medical advice/attention. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. In case of fire: Use appropriate media to extinguish. Collect spillage.

Storage

Store in a well-ventilated place. Keep cool. 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
Toluene	108-88-3	<1
Xylene	1330-20-7	<1
Ethylbenzene	100-41-4	<0.5
Benzene	71-43-2	<0.2
Naphthalene	91-20-3	<0.2

Composition comments

Dangerous amounts of hydrogen sulfide, a highly toxic gas, may be present, especially in the headspace of containers.

Note: Component ranges represent multiple product grades (see Synonyms - Section 1). Actual concentrations may be substantially less than the maximum values shown or zero, depending on the product grade or specifications.

4. First-aid measures

Inhalation

Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention if discomfort develops or persists.

Skin contact

Remove contaminated clothing and shoes. Wash off immediately with soap and plenty of water. Get medical attention if irritation develops or persists. Wash clothing separately before reuse. Destroy or thoroughly clean contaminated shoes.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention.

Ingestion	Rinse mouth thoroughly. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content does not get into the lungs. Never give anything by mouth to a victim who is unconscious or is having convulsions. Get medical attention immediately.
Most important symptoms/effects, acute and delayed	Irritation of nose and throat. Irritation of eyes and mucous membranes. Skin irritation. Unconsciousness. Corneal damage. Narcosis. Cyanosis (blue tissue condition, nails, lips, and/or skin). Decrease in motor functions. Behavioral changes. Edema. Liver enlargement. Jaundice. Conjunctivitis. Proteinuria. Defatting of the skin. Rash.
Indication of immediate medical attention and special treatment needed	In case of shortness of breath, give oxygen. 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 attention/advice. 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 re-use.

5. Fire-fighting measures

Suitable extinguishing media	Water spray. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use a solid water stream as it may scatter and spread fire.
Specific hazards arising from the chemical	Vapor may cause flash fire. Vapors can flow along surfaces to distant ignition source and flash back. Sensitive to static discharge.
Special protective equipment and precautions for firefighters	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.
Fire fighting equipment/instructions	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. Withdraw immediately in case of rising sound from venting safety devices or any discoloration of tanks due to fire. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Move containers from fire area if you can do it without risk. In the event of fire, cool tanks with water spray. Cool containers exposed to flames with water until well after the fire is out. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Vapors may form explosive air mixtures even at room temperature. Prevent buildup of vapors or gases to explosive concentrations. Some of these materials, if spilled, may evaporate leaving a flammable residue. Water runoff can cause environmental damage. Use compatible foam to minimize vapor generation as needed.
Specific methods	Use water spray to cool unopened containers.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Local authorities should be advised if significant spills cannot be contained. Keep upwind. Keep out of low areas. Ventilate closed spaces before entering. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. See Section 8 of the SDS for Personal Protective Equipment.
Methods and materials for containment and cleaning up	<p>ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways.</p> <p>Large Spills: Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.</p> <p>Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. This material and its container must be disposed of as hazardous waste.</p>
Environmental precautions	If facility or operation has an "oil or hazardous substance contingency plan", activate its procedures. Stay upwind and away from spill. Wear appropriate protective equipment including respiratory protection as conditions warrant. Do not enter or stay in area unless monitoring indicates that it is safe to do so. Isolate hazard area and restrict entry to emergency crew. Review Firefighting Measures, Section 5, before proceeding with clean up. Prevent spilled material from entering sewers, storm drains, other unauthorized treatment or drainage systems and natural waterways. Contact fire authorities and appropriate federal, state and local agencies. If spill of any amount is made into or upon navigable waters, the contiguous zone, or adjoining shorelines, contact the National Response Center at 1-800-424-8802. For highway or railways spills, contact Chemtrec at 1-800-424-9300.

7. Handling and storage

Precautions for safe handling

Wear personal protective equipment. Avoid breathing mist or vapor from heated material. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Use only with adequate ventilation. Wash thoroughly after handling. Do not handle, store or open near an open flame, sources of heat or sources of ignition. When using, do not eat, drink or smoke. Avoid release to the environment.

Conditions for safe storage, including any incompatibilities

Flammable liquid storage. Do not handle liquid (heated) material; allow to cool and solidify before handling. Liquid must be transferred and stored in engineered systems designed for heated materials.

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/m3	Mist.
Distillates (petroleum), light hydrocracked (CAS 64741-77-1)	PEL	5 mg/m3	Mist.
Ethylbenzene (CAS 100-41-4)	PEL	435 mg/m3	
		100 ppm	
Light Cycle Oil (CAS 64741-59-9)	PEL	400 mg/m3	
		100 ppm	
Light naphthenic distillate (petroleum) (CAS 64741-52-2)	PEL	5 mg/m3	Mist.
Naphthalene (CAS 91-20-3)	PEL	50 mg/m3	
		10 ppm	
Xylene (CAS 1330-20-7)	PEL	435 mg/m3	
		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
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/m3	Inhalable fume.
Benzene (CAS 71-43-2)	STEL	2.5 ppm	
	TWA	0.5 ppm	
Ethylbenzene (CAS 100-41-4)	TWA	20 ppm	
Naphthalene (CAS 91-20-3)	TWA	10 ppm	
Toluene (CAS 108-88-3)	TWA	20 ppm	
Xylene (CAS 1330-20-7)	STEL	150 ppm	
	TWA	100 ppm	

US. NIOSH: Pocket Guide to Chemical Hazards

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.
Distillates (petroleum), light hydrocracked (CAS 64741-77-1)	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	
Light Cycle Oil (CAS 64741-59-9)		100 ppm	
	TWA	400 mg/m ³	
		100 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	
Toluene (CAS 108-88-3)		10 ppm	
	STEL	560 mg/m ³	
	TWA	375 mg/m ³	
Xylene (CAS 1330-20-7)		100 ppm	
	STEL	655 mg/m ³	
	TWA	435 mg/m ³	
		150 ppm	
		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	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	*
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 Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses. If splash potential exists, wear full face shield or chemical goggles.

Skin protection

Hand protection Avoid exposure - obtain special instructions before use. Wear protective gloves. Protective gloves.

Skin protection

Other Wear chemical-resistant, impervious gloves. Flame retardant protective clothing is recommended.

Respiratory protection Wear a NIOSH-approved (or equivalent) respirator as needed.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Consult supervisor for special handling instructions. Avoid contact with eyes. Avoid contact with skin. Keep away from food and drink. Wash hands before breaks and immediately after handling the product. Provide eyewash station and safety shower. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance Dark brown to black liquid.

Physical state Liquid.

Form Viscous liquid at ambient temperatures.

Color Brown/black.

Odor Strong petroleum.

Odor threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range Not available.

Flash point 100.0 - 150.0 °F (37.8 - 65.6 °C) (Tag open-cup) Depending on product specifications.

Evaporation rate Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) > 1

Flammability limit - upper (%) < 7

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure Not available.

Vapor density > 1.6 (Air = 1)

Relative density 0.96 - 1.01 (Water=1)

Solubility(ies)

Solubility (water) Not available.

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature 299.84 - 567.43 °F (148.8 - 297.46 °C)

Decomposition temperature Not available.

Viscosity Not available.

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 Flames and sparks. Ignition sources. Contact with incompatible materials. Do not pressurize, cut, weld, braze, solder, drill, grind or expose empty containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode and cause injury or death.

Incompatible materials Strong oxidizing agents.

Hazardous decomposition products No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation Harmful if inhaled. In high concentrations, vapors and spray mists are narcotic and may cause headache, fatigue, dizziness and nausea.

Skin contact Causes skin irritation. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

Eye contact May cause eye irritation.

Ingestion May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics Irritation of nose and throat. Irritation of eyes and mucous membranes. Skin irritation. Unconsciousness. Corneal damage. Narcosis. Cyanosis (blue tissue condition, nails, lips, and/or skin). Decrease in motor functions. Behavioral changes. Edema. Liver enlargement. Jaundice. Conjunctivitis. Proteinuria. Defatting of the skin. Rash.

Information on toxicological effects

Acute toxicity Harmful if inhaled.

Components	Species	Test Results
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Benzene (CAS 71-43-2)

Acute

Oral

LD50

Rat

930 mg/kg

Ethylbenzene (CAS 100-41-4)

Acute

Dermal

LD50

Rabbit

15400 mg/kg

Components	Species	Test Results
Inhalation		
LC50	Rat	17.4 mg/l, 4 hours
Oral		
LD50	Rat	3500 - 4700 mg/kg
Hydrogen sulfide (CAS 7783-06-4)		
Acute		
Inhalation		
LC50	Rat	> 0.38 mg/l, 960 Minutes
Light Cycle Oil (CAS 64741-59-9)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Inhalation		
LC50	Rat	> 4.65 mg/l
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		
Inhalation		
LC50	Rat	8000 mg/l, 4 Hours
Oral		
LD50	Rat	3 g/kg
Xylene (CAS 1330-20-7)		
Acute		
Oral		
LD50	Rat	3523 mg/kg
Skin corrosion/irritation	Causes skin irritation.	
Serious eye damage/eye irritation	Based on available data, the classification criteria are not met.	
Respiratory or skin sensitization		
Respiratory sensitization	Based on available data, the classification criteria are not met.	
Skin sensitization	Based on available data, the classification criteria are not met.	
Germ cell mutagenicity	May cause genetic defects. In in-vitro experiments benzene did not change the number of sister-chromatid exchanges (SCEs) or the number of chromosomal aberrations in human lymphocytes.	
Carcinogenicity	May cause cancer. Occupational exposure to straight-run asphalts and their emissions during road paving: 2B Possibly carcinogenic to humans.	
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 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)	Known To Be Human Carcinogen. Reasonably Anticipated to be a Human Carcinogen.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Benzene (CAS 71-43-2)	Cancer
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Reproductive toxicity

Suspected of damaging fertility or the unborn child. Animal studies of benzene have shown testicular effects, alterations in reproductive cycles, chromosomal aberrations and embryo/fetotoxicity. May damage fertility or the unborn child. Can cause adverse reproductive effects - such as birth defects, miscarriages, or infertility. Avoid exposure to women during early pregnancy. Avoid contact during pregnancy/while nursing.

Specific target organ toxicity - single exposure

Based on available data, the classification criteria are not met.

Specific target organ toxicity - repeated exposure

May cause damage to the following organs through prolonged or repeated exposure: Lungs.

Aspiration hazard

May be fatal if swallowed and enters airways.

Chronic effects

Prolonged and repeated exposure to benzene may cause serious injury to blood forming organs and is associated with anemia and to the later development of acute myelogenous leukemia (AML). Danger of serious damage to health by prolonged exposure. Prolonged or repeated overexposure may cause central nervous system, kidney, liver, and lung damage.

Further information

Symptoms may be delayed. Components of the product may be absorbed into the body through the skin.

12. Ecological information

Ecotoxicity

Toxic to aquatic life with long lasting effects.

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
Light Cycle Oil (CAS 64741-59-9)			
Aquatic			
Algae	IC50	Algae	0.51 mg/l
Crustacea	EL50	Invertebrates (Invertebrates)	0.32 mg/l
Fish	LL50	Fish	> 0.3 mg/l
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

Components	Species	Test Results
Xylene (CAS 1330-20-7)		
Aquatic		
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)
		2.6 mg/l, 96 hours
Persistence and degradability	None known.	
Bioaccumulative potential	Not available.	
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	Not available.	
Other adverse effects	The product contains volatile organic compounds which have a photochemical ozone creation potential.	

13. Disposal considerations

Disposal instructions	Dispose in accordance with all applicable regulations. This material and its container must be disposed of as hazardous waste. Dispose of this material and its container to hazardous or special waste collection point. 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.
Hazardous waste code	D001: Waste Flammable material with a flash point <140 °F D018: Waste Benzene
Waste from residues / unused products	Dispose of in accordance with local regulations.
Contaminated packaging	Offer rinsed packaging material to local recycling facilities.

14. Transport information

DOT

UN number	UN3256
UN proper shipping name	Elevated temperature liquid, flammable, n.o.s. (Cutback Asphalt)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Packing group	III
Environmental hazards	
Marine pollutant	Yes
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	IB1, T3, TP3, TP29
Packaging exceptions	None
Packaging non bulk	None
Packaging bulk	247

IATA

UN number	UN3256
UN proper shipping name	Elevated temperature liquid, flammable, n.o.s. (Cutback Asphalt)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	-
Environmental hazards	Yes
ERG Code	3L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN3256
UN proper shipping name	ELEVATED TEMPERATURE LIQUID, FLAMMABLE, N.O.S. (Cutback Asphalt)
Transport hazard class(es)	
Class	3

Subsidiary risk	-
Packing group	III
Environmental hazards	
Marine pollutant	Yes
EmS	F-E, S-D
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 applicable.
General information	Shipping descriptions in this section are offered as examples only. Classification for transport must accurately reflect the material hazards as designated under a variety of regulations and is solely the responsibility of the person offering the material into transport for commerce.

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)

Benzene (CAS 71-43-2)	Listed.
Ethylbenzene (CAS 100-41-4)	Listed.
Naphthalene (CAS 91-20-3)	Listed.
Toluene (CAS 108-88-3)	Listed.
Xylene (CAS 1330-20-7)	Listed.

SARA 304 Emergency release notification

Not regulated.

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
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Toxic Substances Control Act (TSCA) All components of the mixture on the TSCA 8(b) inventory are designated "active".

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

Classified hazard categories Flammable (gases, aerosols, liquids, or solids)
Acute toxicity (any route of exposure)
Skin corrosion or irritation
Germ cell mutagenicity
Carcinogenicity
Reproductive toxicity
Specific target organ toxicity (single or repeated exposure)
Aspiration hazard

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Benzene	71-43-2	<0.2
Ethylbenzene	100-41-4	<0.5
Naphthalene	91-20-3	<0.2
Toluene	108-88-3	<1
Xylene	1330-20-7	<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)
Toluene (CAS 108-88-3)
Xylene (CAS 1330-20-7)

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

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

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) 594

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)
Distillates (petroleum), light hydrocracked (CAS 64741-77-1)
Ethylbenzene (CAS 100-41-4)
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)
Light Cycle Oil (CAS 64741-59-9)
Naphthalene (CAS 91-20-3)
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)
Distillates (petroleum), light hydrocracked (CAS 64741-77-1)
Ethylbenzene (CAS 100-41-4)
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. Rhode Island RTK

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)
Ethylbenzene (CAS 100-41-4)
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

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

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)
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)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

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

Issue date 27-June-2013
Revision date 10-January-2020
Version # 05
NFPA ratings



References

EPA: AQUIRE database
NLM: Hazardous Substances Data Base
US. IARC Monographs on Occupational Exposures to Chemical Agents
HSDB® - Hazardous Substances Data Bank
IARC Monographs. Overall Evaluation of Carcinogenicity
National Toxicology Program (NTP) Report on Carcinogens
ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices

Disclaimer

The information in this Safety Data Sheet (SDS) was obtained from sources believed to be reliable and accurate, and is not represented as being absolutely complete. The end user of this product has the responsibility for evaluating the adequacy of the data for the intended application and conditions of use; for determining the safety, toxicity, regulatory requirements, and suitability of the product under these conditions; and for obtaining additional or clarifying data where uncertainty exists. The data serves as general guidance when used in combination with professional judgement of persons experienced in a specific application, use or process; and additional data may be required. Valero Marketing & Supply Co., (Valero) provides this data without any warranty, expressed or implied regarding its correctness or accuracy; and does not assume any liability arising out of product handling, storage, use or disposal by others.