



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name Condensate (Sour)
Version # 03
Revision date 07-16-2010
Product use Feed Stock.
Manufacturer/Supplier Devon US Operations
20 North Broadway
Oklahoma City, OK 73102-8260
Telephone: (405) 235-3611
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Devon Canadian Operations
Calgary, AB. T2P 4H2
2000, 400 – 3rd Avenue SW.
Telephone: (403) 232-7100

Emergency Emergency Chemtrec:
Within the USA (800) 424-9300
Outside the USA (703) 527-3887
Devon Canada Emergency Phone:
(403) 232-7100

2. Hazards Identification

Physical state Liquid.
Appearance Colorless to Yellow, Amber, or Dark Brown.
Emergency overview WARNING

Flammable liquid and vapor. Harmful or fatal if swallowed. Can enter lungs and cause damage. Causes skin irritation. May cause eye irritation. Vapors may cause drowsiness and dizziness.

Hydrogen sulfide, a highly toxic gas, is 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. Contains n-hexane. Prolonged and/or repeated exposures may cause damage to the peripheral nervous system (e.g. fingers, feet, arms etc.). Contains benzene. May cause cancer. May cause heritable genetic damage. May cause drowsiness, dizziness, loss of consciousness and death.

OSHA regulatory status This product is hazardous according to OSHA 29 CFR 1910.1200.

Potential health effects

Routes of exposure Ingestion. Skin contact. Eye contact. Inhalation.

Eyes May cause eye irritation. Exposed individuals may experience eye tearing, redness, and discomfort.

Skin May cause skin irritation. Human and animal studies show that benzene is absorbed through the skin. However, absorption through the skin is normally low because benzene evaporates rapidly. In most cases, any skin contact would also involve significant inhalation exposure.

Inhalation Breathing of high concentrations may cause dizziness, light-headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness. Contains benzene which may cause cancer and cause blood disorders. Contains n-hexane which may cause peripheral nerve damage.

Ingestion Harmful if swallowed. Can enter lungs and cause damage.

Chronic effects Prolonged or repeated contact with skin may cause redness, itching, irritation, eczema/chapping and oil acne. Prolonged and repeated contact with the product may cause skin cancer. May cause damage to the liver. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia. Contains benzene. Human epidemiology studies indicate that prolonged and/or repeated overexposure to benzene may cause damage to the blood-producing system and serious blood disorders, including leukemia. Animal tests suggest that prolonged and/or repeated overexposure to benzene may damage the embryo/fetus. The relevance of these animal studies to humans has not been fully established. May cause cancer. Contains n-hexane. Prolonged and/or repeated exposures may cause damage to the peripheral nervous system (e.g. fingers, feet, arms etc.).

Signs and symptoms Irritation of eyes and mucous membranes. Skin irritation. Defatting of the skin. Dermatitis. May irritate and cause stomach pain, vomiting, diarrhea and nausea.

Potential environmental effects Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Complex mixture of aliphatic and aromatic hydrocarbons (C2-C20)	68919-39-1	98-100
Contains:	-	-
Heptane Plus	142-82-5	0-99
Pentane	109-66-0	0-70
Toluene	108-88-3	0-10
Xylene, mixed isomers	1330-20-7	0-10
n-Hexane	110-54-3	0-10
Butane	106-97-8	0-10
Benzene	71-43-2	0-2
Ethylbenzene	100-41-4	0-2
1, 2, 4-Trimethylbenzene	25551-13-7	0-2
Hydrogen sulfide	7783-06-4	> 0.001

Composition comments The full text for all R-phrases is displayed in Section 16 of the MSDS. All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First Aid Measures

First aid procedures

Eye contact Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyes wide apart. Get medical attention if irritation develops or persists.

Skin contact Remove contaminated clothing. Wash with soap and water. In case of rashes, wounds or other skin disorders: Seek medical attention and bring along these instructions.

Inhalation Move to fresh air. If breathing is difficult, give oxygen. Get medical attention if discomfort develops or persists.

Ingestion Immediately rinse mouth and drink plenty of water or milk. Keep person under observation. Do not induce vomiting. If vomiting occurs, keep head low. Seek immediate medical attention or advice.

Notes to physician Treat symptomatically. The effects might be delayed.

General advice Get medical attention if any discomfort develops. Refer to the Emergency Response Procedures for Ships Carrying Dangerous Goods (EmS Guide) and the Medical First Aid Guide for Use in Accidents Involving Dangerous Goods (MFAG) as necessary.

5. Fire Fighting Measures

Flammable properties The product is flammable, and heating may generate vapors which may form explosive vapor/air mixtures. Material will float and can be re-ignited on surface of water.

Extinguishing media

Suitable extinguishing media Dry chemical, foam, carbon dioxide, water fog.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Protection of firefighters

Specific hazards arising from the chemical Thermal decomposition may produce smoke, oxides of carbon and lower molecular weight organic compounds whose composition have not been characterized. Sulphur Oxides (SOx). Nitrogen Oxides (NOx).

Protective equipment and precautions for firefighters Move containers from fire area if you can do it without risk. Use water spray to cool unopened containers. Cool containers with flooding quantities of water until well after fire is out.

Special protective equipment for fire-fighters Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with full face-piece operated in positive pressure mode. Use approved gas detectors in confined spaces.

Specific methods In the event of fire and/or explosion do not breathe fumes. Evacuate area. Water spray should be used to cool containers.

6. Accidental Release Measures

Personal precautions Eliminate all sources of ignition in vicinity of released vapors. Evacuate all non-essential personnel to an area upwind. Stop leak if possible without any risk. Ventilate enclosed areas to prevent formation of toxic, flammable or oxygen deficient atmospheres. Water spray may be used to reduce vapors. Avoid vapor cloud even with proper respiratory protective equipment. Use suitable protective equipment (section 8). Follow all fire-fighting procedures (section 5). In case of spills, beware of slippery floors and surfaces.

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent material from entering drains, sewers or low lying areas. See section 13 for waste disposal information. Do not contaminate water.

Methods for containment Stop leak if you can do so without risk. Prevent entry into waterways, sewer, basements or confined areas.

Methods for cleaning up Remove sources of ignition. Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible.

Small Spills: Absorb spillage with non-combustible, absorbent material.

Large Spills: Remove with vacuum trucks or pump to storage/salvage vessels. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Wash area with soap and water. Ensure that waste and contaminated materials are collected and removed from the work area as soon as possible in a suitably labeled container.

7. Handling and Storage

Handling Special precautions should be taken when entering or handling equipment in this type of produced oil service because of possible radioactive contamination. All equipment should be checked for radioactivity or opened to the atmosphere and have forced ventilation applied for at least 4 hours prior to entry or handling. Avoid direct skin contact with any surface. Avoid generation of dust, smoke, fumes, etc. in the work area, or if they cannot be avoided, a tested and certified radionuclide dust respirator should be worn. Smoking, eating, or drinking should be prohibited when working with the equipment. Employees should wash thoroughly with soap and water and discard contaminated clothing after entering or handling the equipment. Access to work area should be restricted to people handling the product only. Caution! Vapors may be present in the headspace of closed containers. Ventilate after opening. The inherent toxic and olfactory (sense of smell) fatiguing properties of hydrogen sulfide require that air monitoring alarms be used if concentrations are expected to reach harmful levels, such as in enclosed spaces, heated transport vessels and spill or leak situations. If the air concentration exceeds 10 ppm, the area should be evacuated unless respiratory protection is in use. Wear appropriate personal protective equipment. Immediately change contaminated clothes. The product is flammable, and heating may generate vapors which may form explosive vapor/air mixtures. Ground container and transfer equipment to eliminate static electric sparks. Vapors are heavier than air and may travel along the floor and in the bottom of containers. Be aware of potential for surfaces to become slippery. Observe good industrial hygiene practices.

Storage Follow rules for flammable liquids. Keep away from heat, sparks and open flame. Keep in a cool, well-ventilated place. Keep away from food, drink and animal feeding stuffs. Store away from incompatible materials.

8. Exposure Controls / Personal Protection

Occupational exposure limits

ACGIH Components	Type	Value
1, 2, 4-Trimethylbenzene (25551-13-7)	TWA	25 ppm
Benzene (71-43-2)	STEL	2.5 ppm
	TWA	0.5 ppm
Butane (106-97-8)	TWA	1000 ppm
	STEL	125 ppm
Ethylbenzene (100-41-4)	TWA	100 ppm
	STEL	500 ppm
Heptane Plus (142-82-5)	TWA	400 ppm
	STEL	5 ppm
Hydrogen sulfide (7783-06-4)	TWA	1 ppm

Components	Type	Value
n-Hexane (110-54-3)	TWA	50 ppm
Pentane (109-66-0)	TWA	600 ppm
Toluene (108-88-3)	TWA	20 ppm
Xylene, mixed isomers (1330-20-7)	STEL	150 ppm
	TWA	100 ppm

U.S. - OSHA

Components	Type	Value
Benzene (71-43-2)	Ceiling	25 ppm
	STEL	5 ppm
	TWA	1 ppm
Ethylbenzene (100-41-4)	PEL	100 ppm
		435 mg/m3
Heptane Plus (142-82-5)	PEL	500 ppm
		2000 mg/m3
Hydrogen sulfide (7783-06-4)	Ceiling	20 ppm
n-Hexane (110-54-3)	PEL	500 ppm
		1800 mg/m3
Pentane (109-66-0)	PEL	2950 mg/m3
		1000 ppm
Toluene (108-88-3)	Ceiling	300 ppm
	TWA	200 ppm
Xylene, mixed isomers (1330-20-7)	PEL	435 mg/m3
		100 ppm

Canada - Alberta

Components	Type	Value
1, 2, 4-Trimethylbenzene (25551-13-7)	TWA	25 ppm
		123 mg/m3
Benzene (71-43-2)	STEL	8 mg/m3
		2.5 ppm
	TWA	0.5 ppm
Butane (106-97-8)		1.6 mg/m3
	TWA	1000 ppm
Ethylbenzene (100-41-4)	STEL	125 ppm
		543 mg/m3
	TWA	100 ppm
Heptane Plus (142-82-5)		434 mg/m3
	STEL	2050 mg/m3
		500 ppm
Hydrogen sulfide (7783-06-4)	TWA	1640 mg/m3
		400 ppm
	Ceiling	15 ppm
n-Hexane (110-54-3)		21 mg/m3
	TWA	14 mg/m3
		10 ppm
Pentane (109-66-0)	TWA	50 ppm
		176 mg/m3
Toluene (108-88-3)	TWA	600 ppm
		1770 mg/m3
	TWA	188 mg/m3
		50 ppm

Canada - British Columbia

Components	Type	Value
1, 2, 4-Trimethylbenzene (25551-13-7)	TWA	25 ppm
Benzene (71-43-2)	STEL	2.5 ppm
	TWA	0.5 ppm
Butane (106-97-8)	STEL	750 ppm
	TWA	600 ppm
Ethylbenzene (100-41-4)	STEL	125 ppm

Components	Type	Value
Heptane Plus (142-82-5)	TWA	100 ppm
	STEL	500 ppm
Hydrogen sulfide (7783-06-4)	TWA	400 ppm
	Ceiling	10 ppm
n-Hexane (110-54-3)	TWA	20 ppm
Pentane (109-66-0)	TWA	600 ppm
Toluene (108-88-3)	TWA	20 ppm
Xylene, mixed isomers (1330-20-7)	STEL	150 ppm
	TWA	100 ppm

Additional exposure data OSHA: The acceptable max. peak above the ceiling concentration for an 8-hour shift is: 50 ppm. The acceptable duration of the peak above the ceiling concentration is: 10 minutes once, only if no other measureable exposure occurs

Engineering controls Explosion proof exhaust ventilation should be used. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Provide adequate ventilation and minimize the risk of inhalation of vapors. Provide easy access to water supply and eye wash facilities.

Personal protective equipment

Eye / face protection Wear goggles/face shield.

Skin protection Wear protective gloves. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Protection suit must be worn. Anti-static and flame-retardant protective clothing is recommended. Suitable gloves can be recommended by the glove supplier.

Respiratory protection Wear approved respiratory protection when working with this material unless ventilation is adequate to keep airborne concentrations below recommended exposure standards. Note: If any of the applicable hydrogen sulfide standards are likely to be exceeded, positive supplied-air respiratory protection must be used. The ACGIH TWA for hydrogen sulfide is 10 ppm. The OSHA STEL is 15 ppm.

General hygiene considerations 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. Private clothes and working clothes should be kept separately. Observe any medical surveillance requirements.

9. Physical & Chemical Properties

Appearance	Colorless to Yellow, Amber, or Dark Brown.
Color	Colorless to Yellow, Amber, or Dark Brown.
Odor	Hydrocarbon-like. Petroleum.
Odor threshold	Not available.
Physical state	Liquid.
Form	Liquid.
pH	Not applicable.
Melting point	Not available.
Freezing point	Not available.
Boiling point	97 - 257 °F (36.1 - 125 °C) 1 atm
Flash point	79.7 - 105.1 °F (26.5 - 40.6 °C) Tag Closed Cup
Evaporation rate	> 1 varies with conditons
Flammability	Not available.
Flammability limits in air, upper, % by volume	13 % (Varies with feedstock)
Flammability limits in air, lower, % by volume	1.05 % (Varies with feedstock)
Vapor pressure	15 - 25 psi (37.7°C/ 100°F)
Vapor density	2.49 - 3.94
Specific gravity	0.7541 (15.6°C/60°F)
Solubility (water)	Negligible
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	462.2 - 586.4 °F (239 - 308 °C)

Decomposition temperature	Not available.
Viscosity	< 7 mm ² /s (Kinematic) @ 104 °F (40 °C)
Bulk density	Not applicable.
Percent volatile	Not available.

10. Chemical Stability & Reactivity Information

Chemical stability	Stable at normal conditions.
Conditions to avoid	Heat, sparks, flames, elevated temperatures. Contact with incompatible materials.
Incompatible materials	Strong acids. Strong oxidizing agents.
Hazardous decomposition products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Toxicological data

Components	Test Results
Ethylbenzene (100-41-4)	Acute Dermal LD50 Rabbit: > 5000 mg/kg Acute Oral LD50 Rat: 3500 mg/kg
Butane (106-97-8)	Acute Inhalation LC50 Rat: 658 mg/l 4 Hours
Toluene (108-88-3)	Acute Oral LD50 Rat: 2600 - 7500 mg/kg
Pentane (109-66-0)	Acute Inhalation LC50 Rat: 364 mg/l 4 Hours
Xylene, mixed isomers (1330-20-7)	Acute Oral LD50 Rat: 4300 mg/kg Acute Other LD50 Rat: 3.8 mg/kg
Heptane Plus (142-82-5)	Acute Inhalation LC50 Rat: 103 mg/l 4 Hours
Benzene (71-43-2)	Acute Inhalation LC50 Mouse: 9980 mg/l Acute Inhalation LC50 Rat: 10000 mg/l 7 Hours Acute Oral LD50 Mouse: 4700 mg/kg Acute Oral LD50 Rat: 3306 mg/kg Acute Other LD50 Mouse: 340 mg/kg Acute Other LD50 Mouse: 0.000001 ml/kg Acute Other LD50 Rat: 2.89 mg/kg
Hydrogen sulfide (7783-06-4)	Acute Inhalation LC50 Mouse: > 0.024 mg/l 960 Minutes Acute Inhalation LC50 Rat: > 0.38 mg/l 960 Minutes

Toxicological information This product may contain detectable but varying quantities of the naturally occurring radioactive substance radon 222. The amount in the gas itself is not hazardous, but since radon rapidly decays (t_{1/2} = 3.82 days) to form other radioactive elements including lead 210, polonium 210, and bismuth 210, equipment may be radioactive. The radon daughters are solids and therefore may attach to dust particles or form films and sludges in equipment. Inhalation, ingestion or skin contact with radon daughters can lead to the deposition of radioactive material in the lungs, bone, blood forming organs, intestinal tract, kidney and colon. Occupational exposure to radon and radon daughters has been associated with an increased risk of lung cancer in underground uranium miners. Follow the special precautions listed in handling and storage section of this document (see section 7).

Acute effects Breathing of high concentrations may cause dizziness, light-headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness. 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. May irritate and cause stomach pain, vomiting, diarrhea and nausea.

Local effects Irritating to eyes. Irritating to skin.

Sensitization May cause eczema-like skin disorders (dermatitis). May cause photosensitization, evidenced by repeated occurrence of a dermatitic rash on exposure to sunlight.

Chronic effects Prolonged or repeated contact with skin may cause redness, itching, irritation, eczema/chapping and oil acne. May cause damage to the liver. Contains benzene. Human epidemiology studies indicate that prolonged and/or repeated overexposure to benzene may cause damage to the blood-producing system and serious blood disorders, including leukemia. Animal tests suggest that prolonged and/or repeated overexposure to benzene may damage the embryo/fetus. The relevance of these animal studies to humans has not been fully established. Contains n-hexane. Prolonged and/or repeated exposures may cause damage to the peripheral nervous system (e.g. fingers, feet, arms etc.).

Carcinogenicity May cause cancer. Contains benzene, a known human carcinogen, which may cause leukemia.

ACGIH Carcinogens

Benzene (CAS 71-43-2)	A1 Confirmed human carcinogen.
Ethylbenzene (CAS 100-41-4)	A3 Confirmed animal carcinogen with unknown relevance to humans.
Toluene (CAS 108-88-3)	A4 Not classifiable as a human carcinogen.
Xylene, mixed isomers (CAS 1330-20-7)	A4 Not classifiable as a human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

Benzene (CAS 71-43-2)	1 Carcinogenic to humans.
Ethylbenzene (CAS 100-41-4)	2B Possibly carcinogenic to humans.
Toluene (CAS 108-88-3)	3 Not classifiable as to carcinogenicity to humans.
Xylene, mixed isomers (CAS 1330-20-7)	3 Not classifiable as to carcinogenicity to humans.

US NTP Report on Carcinogens: Known carcinogen

Benzene (CAS 71-43-2)	Known carcinogen.
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US OSHA Specifically Regulated Substances: Cancer hazard

Benzene (CAS 71-43-2)	Cancer hazard.
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Epidemiology Pre-existing skin conditions including dermatitis might be aggravated by exposure to this product.

Mutagenicity May cause heritable genetic damage.

Reproductive effects Possible birth defect hazard based on animal data.

Further information Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia. Components of the product may be absorbed into the body through the skin.

12. Ecological Information

Ecotoxicological data

Product

Condensate (Sour)	EC50 Daphnia: 103 mg/l 48 hours estimated LC50 Fish: 263 mg/l 96 hours estimated
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Components

	Test Results
Ethylbenzene (100-41-4)	EC50 Water flea (Daphnia magna): 1.37 - 4.4 mg/l 48 hours LC50 Rainbow trout,donaldson trout (Oncorhynchus mykiss): 4.2 mg/l 96 hours
Toluene (108-88-3)	EC50 Water flea (Daphnia magna): 5.46 - 9.83 mg/l 48 hours LC50 Coho salmon,silver salmon (Oncorhynchus kisutch): 5.5 mg/l 96 hours
Pentane (109-66-0)	EC50 Daphnia: 2.3 mg/l 48 Hours LC50 Fish: 3.1 mg/l 96 Hours
n-Hexane (110-54-3)	LC50 Fathead minnow (Pimephales promelas): 2.101 - 2.981 mg/l 96 hours
Heptane Plus (142-82-5)	LC50 Mozambique tilapia (Tilapia mossambica): 375 mg/l 96 hours
Benzene (71-43-2)	EC50 Water flea (Daphnia magna): 8.76 - 15.6 mg/l 48 hours EC50 Water flea (Daphnia magna): 8.76 - 15.6 mg/l 48 Hours LC50 Rainbow trout,donaldson trout (Oncorhynchus mykiss): 5 mg/l 96 Hours
Hydrogen sulfide (7783-06-4)	LC50 Lake whitefish (Coregonus clupeaformis): 0.002 mg/l 96 hours

Ecotoxicity Oil spills are generally hazardous to the environment.

Environmental effects The product contains volatile organic compounds which have a photochemical ozone creation potential.

Aquatic toxicity Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Persistence and degradability	The degradability of the product has not been stated. The product meets the definition of the International Oil Pollution Compensation (IPOC) Fund as being a "persistent" oil.
Bioaccumulation / Accumulation	No data available on bioaccumulation.
Partition coefficient (n-octanol/water)	Not available.
Mobility in environmental media	The product is insoluble in water. It will spread on the water surface while some of the components will eventually sediment in water systems. The volatile components of the product will spread in the atmosphere.

13. Disposal Considerations

Waste codes	D001: Waste Flammable material with a flash point <140 °F
Disposal instructions	Dispose in accordance with all applicable regulations. This material and/or its container must be disposed of as hazardous waste.
Waste from residues / unused products	Follow all applicable MARPOL requirements for disposal of waste.
Contaminated packaging	Dispose of in accordance with local regulations.

14. Transport Information

DOT

Basic shipping requirements:

UN number	UN1268
Proper shipping name	Petroleum distillates, n.o.s. (Complex mixture of aliphatic and aromatic hydrocarbons (C2-C20), Heptane Plus)
Hazard class	3
Packing group	III
Special precautions	This product is being carried under the scope of MARPOL Annex 1.
Labels required	3
Additional information:	
Special provisions	144, B1, IB3, T4, TP1, TP29
ERG number	128

IATA

Basic shipping requirements:

UN number	1268
Proper shipping name	Petroleum products, n.o.s. (Complex mixture of aliphatic and aromatic hydrocarbons (C2-C20), Heptane Plus)
Hazard class	3
Packing group	III
Special precautions	This product is being carried under the scope of MARPOL Annex 1.

IMDG

Basic shipping requirements:

UN number	1268
Proper shipping name	Petroleum distillates, n.o.s. (Complex mixture of aliphatic and aromatic hydrocarbons (C2-C20), Heptane Plus)
Hazard class	3
Packing group	III
Environmental hazards	
Marine pollutant	Yes
EmS No.	F-E, S-E
Special precautions	This product is being carried under the scope of MARPOL Annex 1.

TDG

Basic shipping requirements:

Proper shipping name	Petroleum distillates, n.o.s. (Complex mixture of aliphatic and aromatic hydrocarbons (C2-C20), Heptane Plus)
Hazard class	3
UN number	UN1268
Packing group	III

General This product is being carried under the scope of MARPOL Annex 1.



DOT



IATA



IMDG



TDG

15. Regulatory Information

US federal regulations

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

All components are on the U.S. EPA TSCA Inventory List.

US EPCRA (SARA Title III) Section 302 - Extremely Hazardous Spill: Reportable quantity

Hydrogen sulfide (CAS 7783-06-4) 100 LBS

US EPCRA (SARA Title III) Section 302 - Extremely Hazardous Substance: Threshold Planning Quantity

Hydrogen sulfide (CAS 7783-06-4) 500 LBS

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration

1, 2, 4-Trimethylbenzene (CAS 25551-13-7) 1.0 %

Benzene (CAS 71-43-2) 0.1 %

Ethylbenzene (CAS 100-41-4) 0.1 %

n-Hexane (CAS 110-54-3) 1.0 %

Toluene (CAS 108-88-3) 1.0 %

Xylene, mixed isomers (CAS 1330-20-7) 1.0 %

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

1, 2, 4-Trimethylbenzene (CAS 25551-13-7) Listed.

Benzene (CAS 71-43-2) Listed.

Ethylbenzene (CAS 100-41-4) Listed.

n-Hexane (CAS 110-54-3) Listed.

Toluene (CAS 108-88-3) Listed.

Xylene, mixed isomers (CAS 1330-20-7) Listed.

US TSCA Section 12(b) Export Notification: Export Notification requirement/De minimis concentration

Heptane Plus (CAS 142-82-5) 1.0 % One-Time Export Notification only.

Pentane (CAS 109-66-0) 1.0 % One-Time Export Notification only.

CERCLA (Superfund) reportable quantity (lbs)

Heptane Plus 100

Pentane 100

Toluene 100

Xylene, mixed isomers 1000

n-Hexane 5000

Butane 100

Benzene 10

Ethylbenzene 1000

Hydrogen sulfide 100

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No
Section 302 extremely hazardous substance	No
Section 311 hazardous chemical	No
Drug Enforcement Agency (DEA)	Not controlled
Canadian regulations	This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.
WHMIS status	Controlled
WHMIS classification	B2 - Flammable/Combustible D2A - Other Toxic Effects-VERY TOXIC D2B - Other Toxic Effects-TOXIC

WHMIS labeling



State regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US - California Hazardous Substances (Director's): Listed substance

1, 2, 4-Trimethylbenzene (CAS 25551-13-7)	Listed.
Benzene (CAS 71-43-2)	Listed.
Butane (CAS 106-97-8)	Listed.
Ethylbenzene (CAS 100-41-4)	Listed.
Heptane Plus (CAS 142-82-5)	Listed.
Hydrogen sulfide (CAS 7783-06-4)	Listed.
n-Hexane (CAS 110-54-3)	Listed.
Pentane (CAS 109-66-0)	Listed.
Toluene (CAS 108-88-3)	Listed.
Xylene, mixed isomers (CAS 1330-20-7)	Listed.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Benzene (CAS 71-43-2)	Listed.
Ethylbenzene (CAS 100-41-4)	Listed.
Toluene (CAS 108-88-3)	Listed.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Benzene (CAS 71-43-2)	Listed: February 27, 1987 Carcinogenic.
Ethylbenzene (CAS 100-41-4)	Listed: June 11, 2004 Carcinogenic.

US - California Proposition 65 - CRT: Listed date/Developmental toxin

Benzene (CAS 71-43-2)	Listed: December 26, 1997 Developmental toxin.
Toluene (CAS 108-88-3)	Listed: January 1, 1991 Developmental toxin.

US - California Proposition 65 - CRT: Listed date/Female reproductive toxin

Toluene (CAS 108-88-3)	Listed: August 7, 2009 Female reproductive toxin.
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US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

Benzene (CAS 71-43-2)	Listed: December 26, 1997 Male reproductive toxin.
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US - Massachusetts RTK - Substance: Listed substance

1, 2, 4-Trimethylbenzene (CAS 25551-13-7)	Listed.
Benzene (CAS 71-43-2)	Listed.
Butane (CAS 106-97-8)	Listed.
Ethylbenzene (CAS 100-41-4)	Listed.
Heptane Plus (CAS 142-82-5)	Listed.
Hydrogen sulfide (CAS 7783-06-4)	Listed.
n-Hexane (CAS 110-54-3)	Listed.
Pentane (CAS 109-66-0)	Listed.
Toluene (CAS 108-88-3)	Listed.

US - New Jersey Community RTK (EHS Survey): Reportable threshold

1, 2, 4-Trimethylbenzene (CAS 25551-13-7)	500 LBS
Benzene (CAS 71-43-2)	500 LBS
Butane (CAS 106-97-8)	500 LBS
Ethylbenzene (CAS 100-41-4)	500 LBS
Hydrogen sulfide (CAS 7783-06-4)	500 LBS
n-Hexane (CAS 110-54-3)	500 LBS
Pentane (CAS 109-66-0)	500 LBS
Toluene (CAS 108-88-3)	500 LBS
Xylene, mixed isomers (CAS 1330-20-7)	500 LBS

US - New Jersey RTK - Substances: Listed substance

1, 2, 4-Trimethylbenzene (CAS 25551-13-7)	Listed.
Benzene (CAS 71-43-2)	Listed.
Butane (CAS 106-97-8)	Listed.
Ethylbenzene (CAS 100-41-4)	Listed.
Heptane Plus (CAS 142-82-5)	Listed.
Hydrogen sulfide (CAS 7783-06-4)	Listed.
n-Hexane (CAS 110-54-3)	Listed.
Pentane (CAS 109-66-0)	Listed.
Xylene, mixed isomers (CAS 1330-20-7)	Listed.

US - Pennsylvania RTK - Hazardous Substances: Listed substance

1, 2, 4-Trimethylbenzene (CAS 25551-13-7)	Listed.
Benzene (CAS 71-43-2)	Listed.
Butane (CAS 106-97-8)	Listed.
Ethylbenzene (CAS 100-41-4)	Listed.
Heptane Plus (CAS 142-82-5)	Listed.
Hydrogen sulfide (CAS 7783-06-4)	Listed.
n-Hexane (CAS 110-54-3)	Listed.
Pentane (CAS 109-66-0)	Listed.
Toluene (CAS 108-88-3)	Listed.
Xylene, mixed isomers (CAS 1330-20-7)	Listed.

US - Pennsylvania RTK - Hazardous Substances: Special hazard

Benzene (CAS 71-43-2)	Special hazard.
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16. Other Information**HMIS® ratings**

Health: 2*
Flammability: 3
Physical hazard: 0

NFPA ratings

Health: 2
Flammability: 3
Instability: 0

Disclaimer

This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.

Issue date

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