PETRO STAR INC.

Safety Data Sheet

Material Name: JP-4
Synonyms: Jet B

* * * Section 1 - Product and Company Identification * * *

Manufacturer Information

Petro Star, Inc.
3900 C Street
Suite 802
Anchorage, AK 99503-5963

Phone: 907-339-6600

* * * Section 2 - Hazards Identification * * *

GHS Classification:

Flammable Liquid - Category 2
Germ Cell Mutagenicity - Category 1B
Carcinogenicity - Category 1B
Reproductive Toxicity - Category 2
Specific Target Organ Toxicity (Single Exposure) - Category 3 (narcosis)
Specific Target Organ Toxicity (Repeated Exposure) - Category 2
Aspiration Hazard - Category 1

GHS LABEL ELEMENTS

Symbol(s)

Signal Word

Danger

Hazard Statements

Highly flammable liquid and vapor.
May cause genetic defects.
May cause cancer.
Suspected of damaging fertility or the unborn child.
May cause drowsiness or dizziness.
May cause damage to organs (liver, kidneys, blood, brain, eyes, auditory nerve, heart, and nervous system) through prolonged or repeated exposure.
May be fatal if swallowed and enters airways.

Precautionary Statements

Prevention

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.

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe fume/mist/vapors/spray.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.

Response

In case of fire: Use water spray, fog, or foam to extinguish.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. DO NOT induce vomiting.
IF exposed or concerned: Get medical advice/attention.
Get medical advice/attention if you feel unwell.

Storage

Store in a well-ventilated place. Keep cool. Keep container tightly closed.
Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

* * * Section 3 - Composition / Information on Ingredients * * *

CAS #	Component	Percent
64741-41-9	A complex combination of C9-C16 Hydrocarbons produced by distillation of crude	100
100-41-4	Ethylbenzene	0-4
108-88-3	Toluene	0-4
1330-20-7	Xylenes (o-, m-, p- isomers)	<1
110-54-3	Hexane	0-1
110-82-7	Cyclohexane	0-1
71-43-2	Benzene	0-0.5
98-82-8	Cumene	0-0.25
95-63-6	Benzene, 1,2,4-trimethyl-	0-0.2
91-20-3	Naphthalene	0-0.1

* * * Section 4 - First Aid Measures * * *

First Aid: Eyes

Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Get medical attention if irritation persists.

First Aid: Skin

Immediately wash skin with plenty of soap and water while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists. Place contaminated clothing in closed container for storage until laundered or discarded. If clothing is to be laundered, inform person performing operation of contaminant's hazardous properties. Discard contaminated leather goods.

First Aid: Ingestion

Do not induce vomiting because of danger of aspirating liquid into lungs, causing serious damage and chemical pneumonitis. If spontaneous vomiting occurs, keep head below hips to prevent aspiration and monitor for breathing difficulty. Gastric lavage should be performed only by qualified medical personnel. Keep affected person warm and at rest. GET IMMEDIATE MEDICAL ATTENTION.

First Aid: Inhalation

Remove to fresh air. If not breathing, institute rescue breathing. If breathing is difficult, ensure airway is clear and give oxygen. Keep affected person warm and at rest. GET IMMEDIATE MEDICAL ATTENTION.

* * * Section 5 - Fire Fighting Measures * * *

General Fire Hazards

See Section 9 for Flammability Properties.
Vapors may form explosive mixture with air. Vapors can travel to a source of ignition and flash back. Explosion hazard if exposed to extreme heat or to physical or thermal shock.

Hazardous Combustion Products

Combustion may produce hazardous combustion products and other decomposition products in the case of incomplete combustion.

Extinguishing Media

Use water spray, dry chemical, carbon dioxide or fire-fighting foam for Class B fires to extinguish fire.

Unsuitable Extinguishing Media

None

Fire Fighting Equipment/Instructions

Evacuate area and fight fire from a safe distance. If leak or spill has not ignited, ventilate area and use water spray to disperse gas or vapor and to protect personnel attempting to stop a leak. Use water spray to cool adjacent structures and to protect personnel. Shut off source of flow if possible. Stay away from storage tank ends. Withdraw immediately in case of rising sound from venting safety device or any discoloration of storage tank due to fire.

Firefighters must wear NIOSH approved positive pressure breathing apparatus (SCBA) with full face mask and full protective equipment.

* * * Section 6 - Accidental Release Measures * * *

Recovery and Neutralization

Eliminate and/or shut off ignition sources and keep ignition sources out of the area. Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind. Isolate for 800 meters (1/2 mile) in all directions if tank, rail car or tank truck is involved in fire

Materials and Methods for Clean-Up

For large spills, consider initial evacuation for at least 300 meters (1000 feet.) Keep ignition sources out of area and shut off all ignition sources. Absorb spill with inert material (e.g. dry sand or earth) then place in a chemical waste container. Large Spills: Dike far ahead of liquid spill for later disposal. Use a vapor suppressing foam to reduce vapors. Stop leak when safe to do so.

Emergency Measures

Keep unnecessary people away. Isolate area for at least 25 to 50 meters (80 to 160 feet) to preserve public safety.

Personal Precautions and Protective Equipment

Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

Environmental Precautions

If material is released to the environment, take immediate steps to stop and contain release. Caution should be exercised regarding personnel safety and exposure to the released material. Notify local authorities and the National Response Center, if required.

Prevention of Secondary Hazards

None

* * * Section 7 - Handling and Storage * * *

Handling Procedures

Ground lines and equipment used during transfer to reduce the possibility of static spark-initiated fire or explosion. Use non-sparking tools. Do not cut, grind, drill, weld or reuse containers unless adequate precautions are taken against these hazards. Do not eat, drink or smoke in areas of use or storage.

Storage Procedures

Store in tightly closed containers in a cool, dry, isolated, well-ventilated area away from heat, sources of ignition and incompatibles. Avoid contact with strong oxidizers. Empty containers may contain material residue. Do not reuse without adequate precautions. Do not eat, drink or smoke in areas of use or storage.

Incompatibilities

Strong oxidizers.

* * * Section 8 - Exposure Controls / Personal Protection * * *

Component Exposure Limits

Toluene (108-88-3)

ACGIH: 20 ppm TWA
OSHA: 200 ppm TWA
300 ppm Ceiling
NIOSH: 100 ppm TWA; 375 mg/m3 TWA
150 ppm STEL; 560 mg/m3 STEL

Ethylbenzene (100-41-4)

ACGIH: 20 ppm TWA
OSHA: 100 ppm TWA; 435 mg/m3 TWA
NIOSH: 100 ppm TWA; 435 mg/m3 TWA
125 ppm STEL; 545 mg/m3 STEL

Xylenes (o-, m-, p- isomers) (1330-20-7)

ACGIH: 100 ppm TWA
150 ppm STEL
OSHA: 100 ppm TWA; 435 mg/m3 TWA

Hexane (110-54-3)

ACGIH: 50 ppm TWA
Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA: 500 ppm TWA; 1800 mg/m3 TWA
NIOSH: 50 ppm TWA; 180 mg/m3 TWA

Cyclohexane (110-82-7)

ACGIH: 100 ppm TWA
OSHA: 300 ppm TWA; 1050 mg/m3 TWA
NIOSH: 300 ppm TWA; 1050 mg/m3 TWA

Benzene (71-43-2)

ACGIH: 0.5 ppm TWA
2.5 ppm STEL
Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA: 5 ppm STEL (Cancer hazard, Flammable, See 29 CFR 1910.1028, 15 min); 0.5 ppm Action Level; 1 ppm TWA
10 ppm TWA (applies to industry segments exempt from the benzene standard at 29 CFR 1910.1028); 1 ppm TWA
5 ppm STEL (see 29 CFR 1910.1028)
25 ppm Ceiling
NIOSH: 0.1 ppm TWA
1 ppm STEL

Cumene (98-82-8)

ACGIH: 50 ppm TWA
OSHA: 50 ppm TWA; 245 mg/m3 TWA
prevent or reduce skin absorption
NIOSH: 50 ppm TWA; 245 mg/m3 TWA
Potential for dermal absorption

Benzene, 1,2,4-trimethyl- (95-63-6)

NIOSH: 25 ppm TWA; 125 mg/m3 TWA

Naphthalene (91-20-3)

ACGIH: 10 ppm TWA
15 ppm STEL
Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA: 10 ppm TWA; 50 mg/m3 TWA
NIOSH: 10 ppm TWA; 50 mg/m3 TWA
15 ppm STEL; 75 mg/m3 STEL

Engineering Measures

Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.

Personal Protective Equipment: Respiratory

A NIOSH approved air purifying respirator with an appropriate cartridge or canister, such as an organic vapor cartridge, may be used in circumstances where airborne concentrations may exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

Personal Protective Equipment: Hands

Wear protective gloves when handling.

Personal Protective Equipment: Eyes

Wear chemical safety glasses, goggles, and/or face shield. Have eye washing facilities readily available where eye contact can occur.

Personal Protective Equipment: Skin and Body

Normal work clothing (long sleeved shirts and long pants) is recommended.

* * * Section 9 - Physical & Chemical Properties * * *

Appearance:	Clear	**Odor:**	Characteristic petroleum distillate odor
Physical State:	Liquid	**pH:**	Essentially Neutral
Vapor Pressure:	1.0-2.0 psi @ 100 °F (38 °C)	**Vapor Density (air =1):**	>1
Boiling Point:	162 °F	**Melting Point:**	-85°F
Solubility (H2O):	Negligible	**Specific Gravity:**	0.75
Evaporation Rate:	ND	**VOC:**	ND
Octanol/H2O Coeff.:	ND	**Flash Point:**	<-20 °F (<-29 °C)
Flash Point Method:	TCC	**Upper Flammability Limit (UFL):**	ND
Lower Flammability Limit (LFL):	ND	**Burning Rate:**	ND
Auto Ignition:	ND		

* * * Section 10 - Chemical Stability & Reactivity Information * * *

Chemical Stability

This is a stable material.

Hazardous Reaction Potential

Will not occur.

Conditions to Avoid

Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources.

Incompatible Products

Keep away from strong oxidizers.

Hazardous Decomposition Products

Combustion may produce carbon monoxide, carbon dioxide and other low molecular weight hydrocarbons.

* * * Section 11 - Toxicological Information * * *

Acute Toxicity

A: General Product Information

Exposure to components of this material may cause the following specific symptoms, depending on the concentration and duration of exposure: anemia.

Acute or chronic overexposure to this material or its components may cause systemic toxicity, including adverse effects to the following: skin, blood elements, liver, kidney, cardiovascular, nervous and respiratory system.

Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage (sometimes referred to as solvent or painter's syndrome). Intentional misuse by deliberately concentrating and inhaling this material may be harmful or fatal.

This material may contain n-hexane. n-Hexane is a skin, eye and respiratory tract irritant. It is a cardiac sensitizer, central nervous system depressant and a neurotoxin. Acute exposure may result in dizziness, asphyxia, anesthesia, brain damage and cardiac arrest at high concentrations. Repeated or prolonged exposure may result in peripheral neuropathy, characterized by progressive weakness, facial and limb numbness, color vision abnormalities and paralysis of the limbs. It has been observed to cause damage to the testes and fetal effects in a two-generation animal study. NTP has reported it to cause liver tumors in female mice. Persons with skin, lung, liver or kidney disorders may be at increased risk.

This material may contain toluene. Toluene is an eye, skin, and respiratory tract irritant as well as a central nervous system depressant. Overexposure may result in damage to the brain, liver, kidney, cardiovascular, respiratory and neurological systems. Prolonged and repeated exposure may result in behavioral effects, anemia, and color vision abnormalities, blindness and hearing loss. It has been shown to produce reproductive effects in both humans and laboratory animals. It has also been reported to produce cardiac sensitization. Repeated or prolonged exposure to toluene may result in skin absorption, which may result in toxic effects. IARC has determined that there is inadequate evidence for the carcinogenicity of toluene in humans and experimental animals (IARC Class 3).

This material may contain benzene. Acute benzene poisoning causes central nervous system depression. Chronic exposure affects the hematopoietic system causing blood disorders including anemia and pancytopenia. This material may contain naphthalene. Naphthalene can be harmful by any route of exposure. Humans may be more sensitive to naphthalene than laboratory animals. Naphthalene can cause skin and eye irritation and acute central nervous system effects. It can also cause blood effects, including hemolytic and aplastic anemia, cataracts, liver and kidney damage. Following maternal exposure, naphthalene has also been reported to cause fetal blood system, liver and possibly eye damage. In a 2-year lifetime inhalation bioassay, female mice showed a significantly increased incidence of pulmonary alveolar and bronchiolar adenomas. On this basis, NTP has determined that there is some evidence of naphthalene carcinogenicity in female mice. Both male and female mice showed evidence of chronic inflammation and its associated response in the respiratory system.

B: Component Analysis - LD50/LC50

Toluene (108-88-3)

Inhalation LC50 Rat 12.5 mg/L 4 h; Inhalation LC50 Rat >26700 ppm 1 h; Oral LD50 Rat 636 mg/kg; Dermal LD50 Rabbit 8390 mg/kg; Dermal LD50 Rat 12124 mg/kg

Ethylbenzene (100-41-4)

Inhalation LC50 Rat 17.2 mg/L 4 h; Oral LD50 Rat 3500 mg/kg; Dermal LD50 Rabbit 15354 mg/kg

Xylenes (o-, m-, p- isomers) (1330-20-7)

Inhalation LC50 Rat 5000 ppm 4 h; Inhalation LC50 Rat 47635 mg/L 4 h; Oral LD50 Rat 4300 mg/kg; Dermal LD50 Rabbit >1700 mg/kg

Hexane (110-54-3)

Inhalation LC50 Rat 48000 ppm 4 h; Oral LD50 Rat 25 g/kg; Dermal LD50 Rabbit 3000 mg/kg

Cyclohexane (110-82-7)

Inhalation LC50 Rat 13.9 mg/L 4 h; Oral LD50 Rat >5000 mg/kg; Dermal LD50 Rabbit >2000 mg/kg

Benzene (71-43-2)

Inhalation LC50 Rat 13050-14380 ppm 4 h; Oral LD50 Rat 1800 mg/kg

Cumene (98-82-8)
Oral LD50 Rat 1400 mg/kg; Inhalation LC50 Rat 39000 mg/m3 4 h; Dermal LD50 Rabbit >3160 mg/kg

Benzene, 1,2,4-trimethyl- (95-63-6)
Inhalation LC50 Rat 18 g/m3 4 h; Oral LD50 Rat 3400 mg/kg; Dermal LD50 Rabbit >3160 mg/kg

Naphthalene (91-20-3)
Inhalation LC50 Rat >340 mg/m3 1 h; Oral LD50 Rat 490 mg/kg; Dermal LD50 Rat >2500 mg/kg; Dermal LD50 Rabbit >20 g/kg

Potential Health Effects: Skin Corrosion Property/Stimulativeness

Contact may cause reddening, pain, itching, inflammation and possible tissue damage. Defatting agent. Repeated or prolonged contact may result in drying, reddening, itching, pain, inflammation, cracking and possible secondary infection with tissue damage. Absorption from prolonged or repeated skin contact may cause systemic toxicity.

Potential Health Effects: Eye Critical Damage/ Stimulativeness

May cause slight transient irritation, lacrimation (tears) and a burning sensation in the eyes. Exposure to vapors, fumes or mists may cause irritation. Prolonged or repeated exposure may cause irritation and conjunctivitis.

Potential Health Effects: Ingestion

May cause irritation of the mouth, throat and gastrointestinal tract. Symptoms may include salivation, pain, nausea, vomiting and diarrhea.

Potential Health Effects: Inhalation

Breathing of mists, vapors or fumes may irritate the nose, throat and lungs. Symptoms may include sore throat, coughing, labored breathing, sneezing and burning sensation, depending on the concentration and duration of exposure.

May cause central nervous system depression or effects. Symptoms may include headache, excitation, euphoria, dizziness, incoordination, drowsiness, light-headedness, blurred vision, fatigue, tremors, convulsions, loss of consciousness, coma, respiratory arrest and death, depending on the concentration and duration of exposure. May cause cardiac sensitization, including arrhythmia (irregular heart beat) and death due to cardiac arrest.

Respiratory Organs Sensitization/Skin Sensitization

This product is not reported to have any skin sensitization effects.

Generative Cell Mutagenicity

May cause genetic defects.

Carcinogenicity

A: General Product Information

May cause cancer.

B: Component Carcinogenicity

Toluene (108-88-3)

ACGIH: A4 - Not Classifiable as a Human Carcinogen
IARC: Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))

Ethylbenzene (100-41-4)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
IARC: Monograph 77 [2000] (Group 2B (possibly carcinogenic to humans))

Xylenes (o-, m-, p- isomers) (1330-20-7)

ACGIH: A4 - Not Classifiable as a Human Carcinogen
IARC: Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))

Benzene (71-43-2)

ACGIH: A1 - Confirmed Human Carcinogen
OSHA: 5 ppm STEL (Cancer hazard, Flammable, See 29 CFR 1910.1028, 15 min); 0.5 ppm Action Level; 1 ppm TWA
NIOSH: potential occupational carcinogen
NTP: Known Human Carcinogen (Select Carcinogen)
IARC: Monograph 100F [2012]; Supplement 7 [1987]; Monograph 29 [1982] (Group 1 (carcinogenic to humans))

Cumene (98-82-8)

IARC: Monograph 101 [in preparation] (Group 2B (possibly carcinogenic to humans))

Naphthalene (91-20-3)

ACGIH: A4 - Not Classifiable as a Human Carcinogen
NTP: Reasonably Anticipated To Be A Human Carcinogen (Possible Select Carcinogen)
IARC: Monograph 82 [2002] (Group 2B (possibly carcinogenic to humans))

Reproductive Toxicity

This product is suspected of damaging fertility or the unborn child.

Specified Target Organ General Toxicity: Single Exposure

May cause drowsiness or dizziness..

Specified Target Organ General Toxicity: Repeated Exposure

This product may cause damage to liver, kidneys, heart, blood, brain, eyes, auditory nerve, heart, and nervous system through prolonged or repeated exposure.

Aspiration Respiratory Organs Hazard

The major health threat of ingestion occurs from the danger of aspiration (breathing) of liquid drops into the lungs, particularly from vomiting. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

* * * Section 12 - Ecological Information * * *

Ecotoxicity

A: General Product Information

Keep out of sewers, drainage areas and waterways. Report spills and releases, as applicable, under Federal and State regulations.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

A complex combination of C9-C16 Hydrocarbons produced by distillation of crude (64741-41-9)

Test & Species	Conditions
72 Hr EC50 Pseudokirchneriella	4700 mg/L

subcapitata

Toluene (108-88-3)

Test & Species		Conditions
96 Hr LC50 Pimephales promelas	15.22-19.05 mg/L [flow-through]	1 day old
96 Hr LC50 Pimephales promelas	12.6 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	5.89-7.81 mg/L [flow-through]	
96 Hr LC50 Oncorhynchus mykiss	14.1-17.16 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	5.8 mg/L [semi-static]	
96 Hr LC50 Lepomis macrochirus	11.0-15.0 mg/L [static]	
96 Hr LC50 Oryzias latipes	54 mg/L [static]	
96 Hr LC50 Poecilia reticulata	28.2 mg/L [semi-static]	
96 Hr LC50 Poecilia reticulata	50.87-70.34 mg/L [static]	
96 Hr EC50 Pseudokirchneriella subcapitata	>433 mg/L	
72 Hr EC50 Pseudokirchneriella subcapitata	12.5 mg/L [static]	
48 Hr EC50 Daphnia magna	5.46 - 9.83 mg/L [Static]	
48 Hr EC50 Daphnia magna	11.5 mg/L	

Ethylbenzene (100-41-4)

Test & Species		Conditions
96 Hr LC50 Oncorhynchus mykiss	11.0-18.0 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	4.2 mg/L [semi-static]	
96 Hr LC50 Pimephales promelas	7.55-11 mg/L [flow-through]	
96 Hr LC50 Lepomis macrochirus	32 mg/L [static]	
96 Hr LC50 Pimephales promelas	9.1-15.6 mg/L [static]	
96 Hr LC50 Poecilia reticulata	9.6 mg/L [static]	
72 Hr EC50 Pseudokirchneriella subcapitata	4.6 mg/L	
96 Hr EC50 Pseudokirchneriella subcapitata	>438 mg/L	
72 Hr EC50 Pseudokirchneriella subcapitata	2.6 - 11.3 mg/L [static]	
96 Hr EC50 Pseudokirchneriella subcapitata	1.7 - 7.6 mg/L [static]	
48 Hr EC50 Daphnia magna	1.8 - 2.4 mg/L	

Xylenes (o-, m-, p- isomers) (1330-20-7)

Test & Species	Conditions
96 Hr LC50 Pimephales promelas	13.4 mg/L [flow-through]
96 Hr LC50 Oncorhynchus mykiss	2.661-4.093 mg/L [static]
96 Hr LC50 Oncorhynchus mykiss	13.5-17.3 mg/L
96 Hr LC50 Lepomis macrochirus	13.1-16.5 mg/L [flow-through]
96 Hr LC50 Lepomis macrochirus	19 mg/L
96 Hr LC50 Lepomis macrochirus	7.711-9.591 mg/L [static]
96 Hr LC50 Pimephales promelas	23.53-29.97 mg/L [static]
96 Hr LC50 Cyprinus carpio	780 mg/L [semi-static]
96 Hr LC50 Cyprinus carpio	>780 mg/L
96 Hr LC50 Poecilia reticulata	30.26-40.75 mg/L [static]
48 Hr EC50 water flea	3.82 mg/L
48 Hr LC50 Gammarus lacustris	0.6 mg/L

Hexane (110-54-3)

Test & Species	Conditions
96 Hr LC50 Pimephales promelas	2.1-2.98 mg/L [flow-through]
24 Hr EC50 Daphnia magna	>1000 mg/L

Cyclohexane (110-82-7)

Test & Species	Conditions
96 Hr LC50 Pimephales promelas	3.96-5.18 mg/L [flow-through]
96 Hr LC50 Pimephales promelas	23.03-42.07 mg/L [static]
96 Hr LC50 Lepomis macrochirus	24.99-44.69 mg/L [static]
96 Hr LC50 Poecilia reticulata	48.87-68.76 mg/L [static]
72 Hr EC50 Desmodesmus subspicatus	>500 mg/L
24 Hr EC50 Daphnia magna	>400 mg/L

Benzene (71-43-2)

Test & Species	Conditions
96 Hr LC50 Pimephales promelas	10.7-14.7 mg/L [flow-through]
96 Hr LC50 Oncorhynchus mykiss	5.3 mg/L [flow-

	through]
96 Hr LC50 Lepomis macrochirus	22.49 mg/L [static]
96 Hr LC50 Poecilia reticulata	28.6 mg/L [static]
96 Hr LC50 Pimephales promelas	22330-41160 µg/L [static]
96 Hr LC50 Lepomis macrochirus	70000-142000 µg/L [static]
72 Hr EC50 Pseudokirchneriella subcapitata	29 mg/L
48 Hr EC50 Daphnia magna	8.76 - 15.6 mg/L [Static]
48 Hr EC50 Daphnia magna	10 mg/L

Cumene (98-82-8)

Test & Species	Conditions
96 Hr LC50 Pimephales promelas	6.04-6.61 mg/L [flow-through]
96 Hr LC50 Oncorhynchus mykiss	4.8 mg/L [flow-through]
96 Hr LC50 Oncorhynchus mykiss	2.7 mg/L [semi-static]
96 Hr LC50 Poecilia reticulata	5.1 mg/L [semi-static]
72 Hr EC50 Pseudokirchneriella subcapitata	2.6 mg/L
48 Hr EC50 Daphnia magna	0.6 mg/L
48 Hr EC50 Daphnia magna	7.9 - 14.1 mg/L [Static]

Benzene, 1,2,4-trimethyl- (95-63-6)

Test & Species	Conditions
96 Hr LC50 Pimephales promelas	7.19-8.28 mg/L [flow-through]
48 Hr EC50 Daphnia magna	6.14 mg/L

Naphthalene (91-20-3)

Test & Species	Conditions
96 Hr LC50 Pimephales promelas	5.74-6.44 mg/L [flow-through]
96 Hr LC50 Oncorhynchus mykiss	1.6 mg/L [flow-through]
96 Hr LC50 Oncorhynchus mykiss	0.91-2.82 mg/L [static]
96 Hr LC50 Pimephales promelas	1.99 mg/L [static]
96 Hr LC50 Lepomis macrochirus	31.0265 mg/L [static]
72 Hr EC50 Skeletonema costatum	0.4 mg/L
48 Hr LC50 Daphnia magna	2.16 mg/L
48 Hr EC50 Daphnia magna	1.96 mg/L [Flow

	through]
48 Hr EC50 Daphnia magna	1.09 - 3.4 mg/L [Static]

Persistence/Degradability

No information available.

Bioaccumulation

No information available.

Mobility in Soil

No information available.

* * * Section 13 - Disposal Considerations * * *

Waste Disposal Instructions

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

Disposal of Contaminated Containers or Packaging

Dispose of contents/container in accordance with local/regional/national/international regulations.

* * * Section 14 - Transportation Information * * *

DOT Information

Shipping Name: Fuel, Aviation, Turbine Engine
Hazard Class: 3
UN #: 1863
Packing Group: II

* * * Section 15 - Regulatory Information * * *

Regulatory Information

US Federal Regulations

Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Toluene (108-88-3)

SARA 313: 1.0 % de minimis concentration
CERCLA: 1000 lb final RQ; 454 kg final RQ

Ethylbenzene (100-41-4)

SARA 313: 0.1 % de minimis concentration
CERCLA: 1000 lb final RQ; 454 kg final RQ

Xylenes (o-, m-, p- isomers) (1330-20-7)

CERCLA: 100 lb final RQ; 45.4 kg final RQ

Hexane (110-54-3)

CERCLA: 5000 lb final RQ; 2270 kg final RQ

Cyclohexane (110-82-7)

CERCLA: 1000 lb final RQ; 454 kg final RQ

Benzene (71-43-2)

SARA 313: 0.1 % de minimis concentration

CERCLA: 10 lb final RQ (received an adjusted RQ of 10 lbs based on potential carcinogenicity in an August 14, 1989 final rule); 4.54 kg final RQ (received an adjusted RQ of 10 lbs based on potential carcinogenicity in an August 14, 1989 final rule)

Cumene (98-82-8)

CERCLA: 5000 lb final RQ; 2270 kg final RQ

Naphthalene (91-20-3)

CERCLA: 100 lb final RQ; 45.4 kg final RQ

State Regulations

A: Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
Toluene	108-88-3	Yes	Yes	Yes	Yes	Yes	No
Ethylbenzene	100-41-4	Yes	Yes	Yes	Yes	Yes	No
Xylenes (o-, m-, p- isomers)	1330-20-7	Yes	Yes	Yes	Yes	Yes	No
Hexane	110-54-3	No	Yes	Yes	Yes	Yes	No
Cyclohexane	110-82-7	Yes	Yes	Yes	Yes	Yes	No
Benzene	71-43-2	Yes	Yes	Yes	Yes	Yes	No
Cumene	98-82-8	Yes	Yes	Yes	Yes	Yes	No
Benzene, 1,2,4-trimethyl-	95-63-6	No	Yes	Yes	Yes	Yes	No
Naphthalene	91-20-3	Yes	Yes	Yes	Yes	Yes	No

WARNING! This product contains a chemical known to the state of California to cause cancer.
WARNING! This product contains a chemical known to the state of California to cause reproductive/developmental effects.

Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Toluene	108-88-3	1 %
Ethylbenzene	100-41-4	0.1 %
Benzene	71-43-2	0.1 %
Benzene, 1,2,4-trimethyl-	95-63-6	0.1 %

Additional Regulatory Information

Component Analysis - Inventory

Component	CAS #	TSCA	CAN	EEC
A complex combination of C9-C16 Hydrocarbons produced by distillation of crude	64741-41-9	Yes	DSL	EINECS
Toluene	108-88-3	Yes	DSL	EINECS
Ethylbenzene	100-41-4	Yes	DSL	EINECS
Xylenes (o-, m-, p- isomers)	1330-20-7	Yes	DSL	EINECS
Hexane	110-54-3	Yes	DSL	EINECS
Cyclohexane	110-82-7	Yes	DSL	EINECS
Benzene	71-43-2	Yes	DSL	EINECS
Cumene	98-82-8	Yes	DSL	EINECS
Benzene, 1,2,4-trimethyl-	95-63-6	Yes	DSL	EINECS
Naphthalene	91-20-3	Yes	DSL	EINECS

* * * Section 16 - Other Information * * *

Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration., NJTSR = New Jersey Trade Secret Registry.

Literature References

None

End of Sheet