

(Material) Safety Data Sheet



Section 1 - Product and Company Identification

Material Name	▪ Aviation Turbine Fuel, Jet-A
CAS Number	▪ No data available
Product Description	▪ Colorless to yellow liquid with petroleum odor.
Synonyms	▪ JET A, Turbine Fuel
Manufacturer	▪ Delek Refining, Ltd. 425 McMurrey Drive Tyler, TX 75702 United States www.delekus.com
Telephone	
General	▪ 903-579-3400
General	▪ 903-579-3502 - Fax
<u>Emergency</u>	▪ (800) 424-9300 - 24 Hour CHEMTREC - National
<u>Emergency</u>	▪ (703) 527-3887 - 24 Hour CHEMTREC - International
Preparation Date	▪ 4/18/2003
Last Revision Date	▪ 11/9/2010

Section 2 - Hazards Identification

Emergency Overview

DANGER

Flammable liquid and vapour. May be fatal if swallowed and enters airways. May cause drowsiness or dizziness. May cause respiratory irritation. Causes skin irritation. Suspected of causing cancer via Inhalation. Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

Prevention	Keep away from heat, sparks, open flames and/or hot surfaces. - No smoking. Ground and/or bond container and receiving equipment. Use only non -sparking tools. Take precautionary measures against static discharge. Use explosion-proof - electrical, ventilating and/or lighting equipment. Keep cool. Keep container tightly closed. Use only outdoors or in a well -ventilated area. Use personal protective equipment as required. Wear protective gloves and eye/face protection -safety goggles. Wash thoroughly after handling. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Avoid release to the environment. Avoid breathing dust, fume, gas, mist, vapours and/or spray.
Response	In case of fire: Use appropriate media for extinction. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. IF SWALLOWED: Immediately call a POISON

CENTER or doctor/physician. Do NOT induce vomiting. IF exposed or concerned: Get medical advice/attention.

Storage/Disposal Store in a well-ventilated place. Keep cool. Store locked up. Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.



Combustible Liquid. Aspiration hazard if swallowed. Can enter lungs and cause damage. Irritating to respiratory system and skin. Suspected human carcinogen. Hazardous to the aquatic environment.

Physical Form	▪ Liquid
Color	▪ Colorless to yellow.
Odor	▪ Petroleum
Flash Point	▪ ≥ 100 F (≥ 37.7778 C)
UEL	▪ 5 %
LEL	▪ .7 %
OSHA	▪ Combustible Liquid, Flammable/Combustible - Class II, Irritant
WHMIS	▪ Class B - Flammable and Combustible Materials - Division 3, Class D - Poisonous and Infectious Materials - Division 2 - Subdivision B



EU	▪ Flammable, Dangerous to the Environment - N, Harmful - Xn, Irritant - Xi R10, R50, R53, R65, R37/38
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GHS	▪ Flammable Liquids - Category 3, Acute Hazards to the aquatic environment - Category 3, Chronic Hazards to the aquatic environment - Category 3, Specific Target Organ Toxicity Single Exposure - Category 3, Skin Corrosion/Irritation - Category 2, Aspiration - Category 1, Carcinogenicity - Category 2
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Route Of Entry	▪ Inhalation, Skin, Ingestion/Oral
Target Organs	▪ Central Nervous System (CNS)
Medical Conditions Aggravated by Exposure	▪ Skin/Dermal, Lungs, Central Nervous System (CNS)

NFPA:



Potential Health Effects

Inhalation

Acute (Immediate)	▪ High vapor concentrations can produce central nervous system depression. May cause irritation.
Chronic (Delayed)	▪ No data available.

Skin**Acute (Immediate)****Chronic (Delayed)**

- May cause irritation.
- Petroleum products are skin defatting agents and can cause dermatitis on prolonged or repeated exposure.

Eye**Acute (Immediate)****Chronic (Delayed)**

- Not expected to cause prolonged or significant irritation.
- No data available.

Ingestion**Acute (Immediate)****Chronic (Delayed)**

- May be irritating to mouth, throat, and stomach. Aspiration into the lungs may cause lung inflammation and damage.
- No data available.

Mutagenic Effects

- This material contains naphthalene, which has proven positive in mutagenicity tests.

Carcinogenic Effects

- Repeated and prolonged exposure may cause cancer.

Carcinogenic Effects			
	CAS	NTP	IARC
Ethylbenzene	100-41-4	Evidence of Carcinogenicity	Group 2B-Possible Carcinogen
Kerosine (petroleum)	8008-20-6	Evidence of Carcinogenicity	Not established
Naphthalene	91-20-3	Reasonably Anticipated to be Human Carcinogen	Group 2B-Possible Carcinogen

Reproductive Effects

- Naphthalene has shown experimental reproductive effects.

Other Chronic Effects

- Human studies indicate that repeated and prolonged exposure to naphthalene or acute exposure to sulfur may cause eye damage ranging from corneal opacity to cataracts. Limited evidence of renal impairment has been noted from a few case reports involving excessive exposure to distillate petroleum. Repeated and prolonged exposure to the components in this product may cause liver, kidney and/or blood damage.

Potential Environmental Effects

- May cause long lasting harmful effects to aquatic life.

See Section 12 for Ecological Information.

Section 3 - Composition/Information on Ingredients

Hazardous Components						
Chemical Name	CAS	%(weight)	UN;EINECS	LD50/LC50	EU Classification & R Phrases	Other
Kerosine (petroleum)	8008-20-6	0% TO 100%	UN1223, 232-366-4	Ingestion/Oral-Rabbit LD50: =2835 mg/kg Ingestion/Oral-Rat LD50: =15 g/kg	Xn; R65	NDA
Kerosine, hydrodesulfurized	64742-81-0	0% TO 100%	265-184-9	NDA	Xn; R65	NDA
Ethylbenzene	100-41-4	0% TO 0.5%	UN1175, 202-849-4	Ingestion/Oral-Rat LD50: =3500 mg/kg Skin-Rabbit LD50: =17800 µL/kg Inhalation-Rat LC50: =55000 mg/m ³ /2 Hour(s)	F; R11 Xn; R20	NDA
Naphthalene	91-20-3	0% TO 0.5%	UN2304, 202-049-5	Skin-Rat LD50: >2500 mg/kg Skin-Rabbit LD50: >20 g/kg	Xn; R22 Carc.Cat.3; R40 N; R50 R53	NDA

Under United States Regulations (29 CFR 1900.1200 - Hazard Communication Standard), this product is considered hazardous. In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS). This product is considered dangerous according to the European Directive 67/548/EEC. According to the Globally Harmonized Standard for Classification and Labeling (GHS) this product is considered hazardous.

See Section 11 for Toxicological Information.

Section 4 - First Aid Measures

- Inhalation**
- Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. Seek medical attention.
- Skin**
- In case of contact with substance, immediately flush skin with running water for at least 20 minutes. If skin irritation occurs: Get medical advice/attention. For minor skin contact, avoid spreading material on unaffected skin. Take off contaminated clothing and wash before reuse.
- Eye**
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- Ingestion**
- Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Obtain medical attention immediately if ingested. Do not leave victim unattended. If person is drowsy or unconscious and vomiting, place on the left side with the head down.
- Notes to Physician**
- Material if aspirated into the lungs may cause chemical pneumonitis. Treat appropriately.
- General Information**
- Call 911 or emergency medical service. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. Keep victim warm and quiet.

See Section 2 for Potential Health Effects.

Section 5 - Fire Fighting Measures

- Extinguishing Media**
- SMALL FIRES: Dry chemical, CO₂, water spray or regular foam.
LARGE FIRE: Water spray, fog or regular foam.
- Unsuitable Extinguishing Media**
- No data available.
- Firefighting Procedures**
- LARGE FIRES: Dike fire control water for later disposal; do not scatter the material. Move containers from fire area if you can do it without risk.
FIRE INVOLVING TANKS AND CAR/TRAILER LOADS: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
FIRES INVOLVING TANKS OR CAR/TRAILER LOADS: Cool containers with flooding quantities of water until well after fire is out.
FIRES INVOLVING TANKS OR CAR/TRAILER LOADS: Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
FIRES INVOLVING TANKS OR CAR/TRAILER LOADS: ALWAYS stay away from tanks engulfed in fire.
FIRES INVOLVING TANKS OR CAR/TRAILER LOADS: For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.
- Unusual Fire and Explosion Hazards**
- Combustible material: may burn but does not ignite readily. May be ignited by heat, sparks or flames. Containers may explode when heated. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapors may travel to source of ignition and flash back. Vapors may form explosive mixtures with air. Vapor explosion hazard indoors, outdoors or in sewers.
- Hazardous Combustion Products**
- Burning or excessive heating may produce smoke, carbon monoxide, carbon dioxide, or other harmful gasses/vapors.
- Protection of Firefighters**
- Wear positive pressure self-contained breathing apparatus (SCBA). Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Flash Point**
- ≥ 100 F (≥ 37.7778 C) TCC (Tagliabue Closed Cup)
- Explosion Limits**
- Upper
- Upper**
- 5

- Lower .7
- Autoignition Temperature 410 F(210 C)

See Section 8 (Exposure Controls/Personal Protection)

Section 6 - Accidental Release Measures

- Personal Precautions**
 - Wear appropriate protective equipment including respiratory protection as conditions warrant. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Emergency Procedures**
 - As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area) Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Stop leak if you can do it without risk. Ventilate closed spaces before entering.
- Environmental Precautions**
 - Prevent entry into waterways, sewers, basements or confined areas.
- Containment/Clean-up Measures**
 - Immediate clean-up of spill is recommended.
All equipment used when handling the product must be grounded.
A vapor suppressing foam may be used to reduce vapors.
Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
Use clean non-sparking tools to collect absorbed material.
LARGE SPILLS: Dike far ahead of liquid spill for later disposal.
LARGE SPILLS: Water spray may reduce vapor; but may not prevent ignition in closed spaces.
- Prohibited Materials**
 - No data available
- General Information**
 - If spill of any amount is made into or upon navigable waters, the contiguous zone, or adjoining shorelines, notify the National Response Center (Phone number 800 -424-8802)

Section 7 - Handling and Storage

- Handling**
 - Handle as combustible liquid. Keep away from heat, sparks, and flame – No Smoking. Bond and ground all equipment when transferring from one vessel to another. Product can accumulate static charge by flow or agitation. Do not enter confined spaces such as tanks or pits without following proper entry procedures. Empty containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death.
- Storage**
 - Store in a cool/low-temperature, well-ventilated place away from heat and ignition sources. Store only in approved containers. Store locked up. Keep container tightly closed. Containers should be clearly labeled. Protect containers against physical damage. Keep away from incompatible materials. Keep away from fire.
- Special Packaging Materials**
 - No data available
- Incompatible Materials or Ignition Sources**
 - Keep away from ignition sources. Avoid contact with strong oxidants such as liquid chlorine, concentrated oxygen, sodium hypochlorite, calcium hypochlorite, etc.

Section 8 - Exposure Controls/Personal Protection

Personal Protective Equipment

Pictograms



Respiratory

- Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face

- No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

Hands

- Chemical-resistant, impervious gloves should be when handling this product.

Skin/Body
General Industrial Hygiene Considerations
Engineering Measures/Controls

- Wear protective clothing
- Handle in accordance with good industrial hygiene and safety practice. Wash hands before eating, drinking, or smoking.
- Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash station and quick-drench shower facility should be available in the work area.

Exposure Limits/Guidelines						
	Result	ACGIH	Canada Ontario	Canada Quebec	NIOSH	OSHA
Kerosine, hydrodesulfurized (64742-81-0)	TWAs	200 mg/m3 TWA (application restricted to conditions in which there are negligible aerosol exposures, total hydrocarbon vapor)	200 mg/m3 TWA EV (restricted to conditions where there is negligible aerosol exposure, as total hydrocarbon vapour)	Not established	Not established	Not established
Naphthalene (91-20-3)	STELs	15 ppm STEL	15 ppm STEV; 78 mg/m3 STEV	15 ppm STEV; 79 mg/m3 STEV	15 ppm STEL; 75 mg/m3 STEL	Not established
	TWAs	10 ppm TWA	10 ppm TWA EV; 52 mg/m3 TWA EV	10 ppm TWA EV; 52 mg/m3 TWA EV	10 ppm TWA; 50 mg/m3 TWA	10 ppm TWA; 50 mg/m3 TWA
Ethylbenzene (100-41-4)	STELs	125 ppm STEL	125 ppm STEV; 540 mg/m3 STEV	125 ppm STEV; 543 mg/m3 STEV	125 ppm STEL; 545 mg/m3 STEL	Not established
	TWAs	100 ppm TWA	100 ppm TWA EV; 435 mg/m3 TWA EV	100 ppm TWA EV; 434 mg/m3 TWA EV	100 ppm TWA; 435 mg/m3 TWA	100 ppm TWA; 435 mg/m3 TWA
Kerosine (petroleum) (8008-20-6)	TWAs	200 mg/m3 TWA (application restricted to conditions in which there are negligible aerosol exposures, total hydrocarbon vapor)	200 mg/m3 TWA EV (restricted to conditions where there is negligible aerosol exposure, as total hydrocarbon vapour)	Not established	100 mg/m3 TWA	Not established

Exposure Control Notations

Canada Ontario

- Kerosine, hydrodesulfurized (64742-81-0): **Skin:** (Absorption through skin, eyes, or mucous membranes)
- Kerosine (petroleum) (8008-20-6): **Skin:** (Absorption through skin, eyes, or mucous membranes)

ACGIH

- Kerosine, hydrodesulfurized (64742-81-0): **Carcinogens:** (A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans) | **Skin:** (Skin - potential significant contribution to overall exposure by the cutaneous route)
- Naphthalene (91-20-3): **Carcinogens:** (A4 - Not Classifiable as a Human Carcinogen) | **Skin:** (Skin - potential significant contribution to overall exposure by the cutaneous route)
- Ethylbenzene (100-41-4): **Carcinogens:** (A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans)
- Kerosine (petroleum) (8008-20-6): **Carcinogens:** (A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans) | **Skin:** (Skin - potential significant contribution to overall exposure by the cutaneous route)

Exposure Limits Supplemental

ACGIH

- Kerosine, hydrodesulfurized (64742-81-0): **TLV Basis - Critical Effects:** (CNS impairment; skin and upper respiratory tract irritation)
- Naphthalene (91-20-3): **TLV Basis - Critical Effects:** (eye damage; eye and upper respiratory tract irritation; hematologic effects)
- Ethylbenzene (100-41-4): **BEIs:** (0.7 g/g creatinine Medium: urine Time: end of shift at end of workweek Parameter: Sum of mandelic acid and phenylglyoxylic acid (nonspecific, semi-quantitative); Medium: end-exhaled air Time: not critical Parameter: Ethyl benzene (semi-quantitative)) | **TLV Basis - Critical Effects:** (CNS impairment; eye and upper respiratory tract irritation)
- Kerosine (petroleum) (8008-20-6): **TLV Basis - Critical Effects:** (CNS impairment; skin and upper respiratory tract irritation)

Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene

STEV = Short Term Exposure Value

MSHA = Mine Safety and Health Administration

TLV = Threshold Limit Value determined by the American Conference of Governmental Industrial Hygienists (ACGIH)

NIOSH = National Institute of Occupational Safety and Health

TWAEV = Time-Weighted Average Exposure Value

OSHA = Occupational Safety and Health Administration

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

STEL = Short Term Exposure Limits are based on 15-minute exposures

BEI = Biological Exposure Indices

Section 9 - Physical and Chemical Properties

Physical Form • Liquid
Appearance/Description • Colorless to yellow liquid with petroleum odor.

Color : Colorless to yellow.		Odor : Petroleum	
Taste : NDA		Odor Threshold : NDA	
Boiling Point:	320 to 572 F(160 to 300 C)	Vapor Pressure:	1 kPa @ 100.00 F
Melting Point:	<= -40 F(<= -40 C)	Vapor Density:	5.7 Air=1
Specific Gravity:	0.75 to 0.84	Evaporation Rate:	NDA
Density:	6.2588 to 7.0098 lbs/gal	VOC (Wt.):	NDA
Bulk Density:	NDA	VOC (Vol.):	NDA
pH:	NDA	Volatiles (Wt.):	NDA
Water Solubility:	NDA	Volatiles (Vol.):	NDA
Solvent Solubility:	NDA	Flash Point:	>= 100 F(>= 37.7778 C)
Viscosity:	<= 8 Centistoke (cSt, cS) or mm2/sec @ 8 Fahrenheit	Flash Point Test Type:	TCC (Tagliabue Closed Cup)
Half-Life:	NDA	UEL:	5 %
Octanol/Water Partition coefficient:	NDA	LEL:	.7 %
Coefficient of water/oil distribution:	NDA	Autoignition:	410 F(210 C)
Bioaccumulation Factor:	NDA	Bioconcentration Factor:	NDA
Biochemical Oxygen Demand BOD/BOD5:	NDA	Chemical Oxygen Demand:	NDA
Persistence:	NDA	Degradation:	NDA

Section 10 - Stability and Reactivity

Stability • Stable under normal temperatures and pressures.
Hazardous Polymerization • Hazardous polymerization will not occur.
Conditions to Avoid • Sources of ignition.
Incompatible Materials • May react with strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Hazardous Decomposition Products • Not anticipated under normal conditions of use.

Section 11 - Toxicological Information

Aspiration hazard if swallowed. Can enter lungs and cause damage. Irritating to respiratory system and skin.

Aviation Turbine Fuel, Jet-A

Test Type	Dosage	Units	Route	Species	Duration	Results	Test Class	Target Organs	Comments
Acute Toxicity	> 5	g/kg	Skin	Rabbit	24 Hour(s)	LD50	NDA	NDA	NDA
Acute Toxicity	> 5	g/kg	Ingestion/Oral	Rat	NDA	LD50	NDA	NDA	NDA
Acute Toxicity	> 5		Inhalation	Rat	4 Hour(s)	LC50	NDA	NDA	NDA
Component Name	Concentration	CAS	Data						
Kerosine (petroleum)	0% TO 100%	8008-20-6	Acute Toxicity: ori-hmn TCLo:5.7 mg/kg; ihl-rat LC :>5 gm/m3/4H; Irritation: skn-rbt 100%/24H MOD						
Kerosine, hydrodesulfurized	0% TO 100%	64742-81-0	Acute Toxicity: ihl-rat LC :>5 gm/m3/4H; skn-rbt LD :>2 gm/kg; Irritation: skn-rbt 500 mg/24H MOD						
Ethylbenzene	0% TO 0.5%	100-41-4	Acute Toxicity: ihl-rat LC50:55000 mg/m3/2H; ihl-hmn TCLo:8700 mg/m3/6M; Irritation: skn-rbt 15 mg/24H open MLD; Reproductive: ihl-rat TCLo:600 mg/m3/24H (7-15D preg); Tumorigen/Carcinogen: ihl-rat TCLo:750 ppm/6H/2Y-I						
Naphthalene	0% TO 0.5%	91-20-3	Acute Toxicity: ori-chd LDLo:100 mg/kg; ori-rbt LDLo:3 gm/kg; ori-mus TDLo:158 mg/kg; ori-rat TDLo:500 mg/kg/10D-I; ori-rat TDLo:600 mg/kg/4D-I; ori-rat TDLo:10 gm/kg/10D-I; ihl-hmn TCLo:250 mg/m3; ihl-rat TCLo:10 ppm/6H; skn-rbt LD50:>20 gm/kg; skn-rat LD50:>2500 mg/kg; skn-rbt TDLo:0.03 mL/kg/24H; Irritation: skn-rbt 0.05 mL/24H SEV; Mutagen: slit-dmg-ori 5 mmol/L; mnt-hmn:lym 30 mg/L; Reproductive: ori-mus TDLo:2400 mg/kg (7-14D preg); Tumorigen/Carcinogen: ihl-rat TCLo:1890 mg/kg/105W-I; ihl-rat TCLo:10 ppm/6H/105W-I						

Key to abbreviations

TC = Toxic Concentration MOD = Moderate
 TD = Toxic Dose SEV = Severe
 LD = Lethal Dose LC = Lethal Concentration
 MLD = Mild

See also Section 2.

Section 12 - Ecological Information

Aviation Turbine Fuel, Jet-A

Dosage	Units	Species	Species Description	Duration	Results	Comments
1.19	mg/L	Crustacea	Mysid Shrimp (Mysidopsis bahia)	7 Day(s)	EC50	NDA

Ecological Fate

- No data available.

Persistence/Degradability

- This material is not expected to be readily biodegradable. The biodegradability of this material is based on an evaluation of data for the components or a similar material.

Bioaccumulation Potential

- No data available.

Mobility in Soil

- No data available.

This material is expected to be toxic to aquatic organisms.

Section 13 - Disposal Considerations

Product

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations. Empty drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner.

Section 14 - Transportation Information

DOT - United States - Department of Transportation

Shipping Name: Fuel, Aviation, Turbine Engine

ID Number: UN1863

Packing Group: III

Passenger aircraft/rail: 5.00 L

Cargo aircraft/rail: 60.00 L

TDG - Canada - Transport of Dangerous Goods

Shipping Name: FUEL, AVIATION, TURBINE ENGINE

ID Number: UN1863

Hazard Class: 3

Labeling Class: 3

Packing Group: III

Explosive Limit and Limited Quantity Index: 1.00

ERAP Index: See Special Provisions

Passenger Carrying Road Vehicle or Passenger Carrying Railway

Vehicle Index: 5.00

IMO/IMDG –International Maritime Transport

Shipping Name: Fuel, Aviation, Turbine Engine

ID Number: 1863

Hazard Class: 3

Packing Group: III

ADN - Europe Transport of Dangerous Goods by Road/Inland Waterway

Shipping Name: Fuel, Aviation, Turbine Engine

ID Number: 1863

Hazard Class: 3

Packing Group: III

IATA - International Air Transport Association

Shipping Name: Fuel, Aviation, Turbine Engine

ID Number: 1863

Hazard Class: 3

Packing Group: III

ADR - Europe Transport of Dangerous Goods by Road/Inland Waterway

Shipping Name: Fuel, Aviation, Turbine Engine

ID Number: 1863

Hazard Class: 3

Packing Group: III

RID - Europe Transport of Dangerous Goods by Railways

Shipping Name: Fuel, Aviation, Turbine Engine

ID Number: 1863

Hazard Class: 3

Packing Group: III

Section 15 - Regulatory Information

- SARA Hazard Classifications**
- Acute, Chronic, Fire
- Risk & Safety Phrases**
- R10 Flammable.
 - R65 Harmful: may cause lung damage if swallowed.
 - R37/38 Irritating to respiratory system and skin.
 - R50 Very toxic to aquatic organisms.
 - R53 May cause long-term adverse effects in the aquatic environment.
 - S2 Keep out of reach of children.
 - S24 Avoid contact with skin.
 - S23 Do not breathe gas/fumes/vapour/spray.
 - S62 If swallowed, do not induce vomiting. Seek medical advice immediately and show the container or label.
 - S29/35 Do not empty into drains; dispose of this material and its container in a safe way.
 - S36 Wear suitable protective clothing.
 - S51 Use only in well ventilated areas.

State Right To Know

Component	CAS	MA	NJ	PA
Kerosine (petroleum)	8008-20-6	Yes	Yes	Yes
Kerosine, hydrodesulfurized	64742-81-0	No	No	No
Ethylbenzene	100-41-4	Yes	Yes	Yes
Naphthalene	91-20-3	Yes	Yes	Yes

Inventory

Component	CAS	Canada DSL	Canada NDSL	EU EINECS	TSCA
Kerosine (petroleum)	8008-20-6	Yes	No	Yes	Yes
Kerosine, hydrodesulfurized	64742-81-0	Yes	No	Yes	Yes
Ethylbenzene	100-41-4	Yes	No	Yes	Yes
Naphthalene	91-20-3	Yes	No	Yes	Yes

Canada

Labor

Canada - WHMIS - Classifications of Substances

- Kerosine, hydrodesulfurized 64742-81-0 0% TO 100% B3, D2B
- Naphthalene 91-20-3 0% TO 0.5% B4, D2A
- Ethylbenzene 100-41-4 0% TO 0.5% B2, D2A, D2B
- Kerosine (petroleum) 8008-20-6 0% TO 100% B3, D2B

Canada - WHMIS - Ingredient Disclosure List

- Kerosine, hydrodesulfurized 64742-81-0 0% TO 100% Not Listed
- Naphthalene 91-20-3 0% TO 0.5% 1 %
- Ethylbenzene 100-41-4 0% TO 0.5% 0.1 %
- Kerosine (petroleum) 8008-20-6 0% TO 100% Not Listed

Environment

Canada - CEPA - Priority Substances List

- Kerosine, hydrodesulfurized 64742-81-0 0% TO 100% Not Listed
- Naphthalene 91-20-3 0% TO 0.5% Not Listed
- Ethylbenzene 100-41-4 0% TO 0.5% Not Listed
- Kerosine (petroleum) 8008-20-6 0% TO 100% Not Listed

Europe

Other

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification

- Kerosine, hydrodesulfurized 64742-81-0 0% TO 100% Xn; R65
- Naphthalene 91-20-3 0% TO 0.5% Xn; R22 Carc.Cat.3; R40 N; R50 R53
- Ethylbenzene 100-41-4 0% TO 0.5% F; R11 Xn; R20
- Kerosine (petroleum) 8008-20-6 0% TO 100% Xn; R65

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits

- Kerosine, hydrodesulfurized 64742-81-0 0% TO 100% Not Listed
- Naphthalene 91-20-3 0% TO 0.5% Not Listed
- Ethylbenzene 100-41-4 0% TO 0.5% Not Listed
- Kerosine (petroleum) 8008-20-6 0% TO 100% Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling

- Kerosine, hydrodesulfurized 64742-81-0 0% TO 100% Xn R:65 S:(2)-23-24-62
- Naphthalene 91-20-3 0% TO 0.5% Xn N R:22-40-50/53 S:(2)-36/37-46-60-61
- Ethylbenzene 100-41-4 0% TO 0.5% F Xn R:11-20 S:(2)-16-24/25-29
- Kerosine (petroleum) 8008-20-6 0% TO 100% Xn R:65 S:(2)-23-24-62

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations

- Kerosine, hydrodesulfurized 64742-81-0 0% TO 100% H
- Naphthalene 91-20-3 0% TO 0.5% Not Listed
- Ethylbenzene 100-41-4 0% TO 0.5% Not Listed
- Kerosine (petroleum) 8008-20-6 0% TO 100% H

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases

- Kerosine, hydrodesulfurized 64742-81-0 0% TO 100% S:(2)-23-24-62
- Naphthalene 91-20-3 0% TO 0.5% S:(2)-36/37-46-60-61
- Ethylbenzene 100-41-4 0% TO 0.5% S:(2)-16-24/25-29
- Kerosine (petroleum) 8008-20-6 0% TO 100% S:(2)-23-24-62

United States

Labor

U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

- Kerosine, hydrodesulfurized 64742-81-0 0% TO 100% Not Listed
- Naphthalene 91-20-3 0% TO 0.5% Not Listed
- Ethylbenzene 100-41-4 0% TO 0.5% Not Listed
- Kerosine (petroleum) 8008-20-6 0% TO 100% Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

- Kerosine, hydrodesulfurized 64742-81-0 0% TO 100% Not Listed
- Naphthalene 91-20-3 0% TO 0.5% Not Listed
- Ethylbenzene 100-41-4 0% TO 0.5% Not Listed
- Kerosine (petroleum) 8008-20-6 0% TO 100% Not Listed

Environment

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

- Kerosine, hydrodesulfurized 64742-81-0 0% TO 100% Not Listed
- Naphthalene 91-20-3 0% TO 0.5%
- Ethylbenzene 100-41-4 0% TO 0.5%
- Kerosine (petroleum) 8008-20-6 0% TO 100% Not Listed

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

- Kerosine, hydrodesulfurized 64742-81-0 0% TO 100% Not Listed
- Naphthalene 91-20-3 0% TO 0.5% 100 lb final RQ; 45.4 kg final RQ
- Ethylbenzene 100-41-4 0% TO 0.5% 1000 lb final RQ; 454 kg final RQ
- Kerosine (petroleum) 8008-20-6 0% TO 100% Not Listed

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

- Kerosine, hydrodesulfurized 64742-81-0 0% TO 100% Not Listed
- Naphthalene 91-20-3 0% TO 0.5% Not Listed
- Ethylbenzene 100-41-4 0% TO 0.5% Not Listed
- Kerosine (petroleum) 8008-20-6 0% TO 100% Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

- Kerosine, hydrodesulfurized 64742-81-0 0% TO 100% Not Listed
- Naphthalene 91-20-3 0% TO 0.5% Not Listed
- Ethylbenzene 100-41-4 0% TO 0.5% Not Listed
- Kerosine (petroleum) 8008-20-6 0% TO 100% Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

- Kerosine, hydrodesulfurized 64742-81-0 0% TO 100% Not Listed
- Naphthalene 91-20-3 0% TO 0.5% Not Listed
- Ethylbenzene 100-41-4 0% TO 0.5% Not Listed
- Kerosine (petroleum) 8008-20-6 0% TO 100% Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

- Kerosine, hydrodesulfurized 64742-81-0 0% TO 100% Not Listed
- Naphthalene 91-20-3 0% TO 0.5% 0.1 % de minimis concentration
- Ethylbenzene 100-41-4 0% TO 0.5% 0.1 % de minimis concentration
- Kerosine (petroleum) 8008-20-6 0% TO 100% Not Listed

U.S. - RCRA (Resource Conservation & Recovery Act) - Basis for Listing - Appendix VII

- Kerosine, hydrodesulfurized 64742-81-0 0% TO 100% Not Listed

- Naphthalene 91-20-3 0% TO 0.5% Included in waste streams: F024, F025, F034, F039, K001, K035, K060, K087, K145
- Ethylbenzene 100-41-4 0% TO 0.5% Included in waste stream: F039
- Kerosine (petroleum) 8008-20-6 0% TO 100% Not Listed

U.S. - RCRA (Resource Conservation & Recovery Act) - Constituents for Detection Monitoring

- Kerosine, hydrodesulfurized 64742-81-0 0% TO 100% Not Listed
- Naphthalene 91-20-3 0% TO 0.5% Not Listed
- Ethylbenzene 100-41-4 0% TO 0.5%
- Kerosine (petroleum) 8008-20-6 0% TO 100% Not Listed

U.S. - RCRA (Resource Conservation & Recovery Act) - Hazardous Constituents - Appendix VIII to 40 CFR 261

- Kerosine, hydrodesulfurized 64742-81-0 0% TO 100% Not Listed
- Naphthalene 91-20-3 0% TO 0.5% waste number U165
- Ethylbenzene 100-41-4 0% TO 0.5% Not Listed
- Kerosine (petroleum) 8008-20-6 0% TO 100% Not Listed

U.S. - RCRA (Resource Conservation & Recovery Act) - List for Hazardous Constituents

- Kerosine, hydrodesulfurized 64742-81-0 0% TO 100% Not Listed
- Naphthalene 91-20-3 0% TO 0.5%
- Ethylbenzene 100-41-4 0% TO 0.5%
- Kerosine (petroleum) 8008-20-6 0% TO 100% Not Listed

U.S. - RCRA (Resource Conservation & Recovery Act) - Phase 4 LDR Rule - Universal Treatment Standards

- Kerosine, hydrodesulfurized 64742-81-0 0% TO 100% Not Listed
- Naphthalene 91-20-3 0% TO 0.5% 0.059 mg/L (wastewater); 5.6 mg/kg (nonwastewater)
- Ethylbenzene 100-41-4 0% TO 0.5% 0.057 mg/L (wastewater); 10 mg/kg (nonwastewater)
- Kerosine (petroleum) 8008-20-6 0% TO 100% Not Listed

U.S. - RCRA (Resource Conservation & Recovery Act) - TSD Facilities Ground Water Monitoring

- Kerosine, hydrodesulfurized 64742-81-0 0% TO 100% Not Listed
- Naphthalene 91-20-3 0% TO 0.5%
- Ethylbenzene 100-41-4 0% TO 0.5%
- Kerosine (petroleum) 8008-20-6 0% TO 100% Not Listed

U.S. - RCRA (Resource Conservation & Recovery Act) - U Series Wastes - Acutely Toxic Wastes & Other Hazardous Characteristics

- Kerosine, hydrodesulfurized 64742-81-0 0% TO 100% Not Listed
- Naphthalene 91-20-3 0% TO 0.5% waste number U165
- Ethylbenzene 100-41-4 0% TO 0.5% Not Listed
- Kerosine (petroleum) 8008-20-6 0% TO 100% Not Listed

U.S. - RCRA (Resource Conservation & Recovery Act) - Waste Minimization Priority Chemicals

- Kerosine, hydrodesulfurized 64742-81-0 0% TO 100% Not Listed
- Naphthalene 91-20-3 0% TO 0.5%
- Ethylbenzene 100-41-4 0% TO 0.5% Not Listed
- Kerosine (petroleum) 8008-20-6 0% TO 100% Not Listed

United States - California

Environment

U.S. - California - Proposition 65 - Carcinogens List

- Kerosine, hydrodesulfurized 64742-81-0 0% TO 100% Not Listed
- Naphthalene 91-20-3 0% TO 0.5% carcinogen, initial date 4/19/02
- Ethylbenzene 100-41-4 0% TO 0.5% carcinogen, initial date 6/11/04
- Kerosine (petroleum) 8008-20-6 0% TO 100% Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

- Kerosine, hydrodesulfurized 64742-81-0 0% TO 100% Not Listed
- Naphthalene 91-20-3 0% TO 0.5% Not Listed
- Ethylbenzene 100-41-4 0% TO 0.5% Not Listed
- Kerosine (petroleum) 8008-20-6 0% TO 100% Not Listed

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

- Kerosine, hydrodesulfurized 64742-81-0 0% TO 100% Not Listed
- Naphthalene 91-20-3 0% TO 0.5% 5.8 µg/day NSRL
- Ethylbenzene 100-41-4 0% TO 0.5% 54 µg/day NSRL (inhalation); 41 µg/day NSRL (oral)
- Kerosine (petroleum) 8008-20-6 0% TO 100% Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

- Kerosine, hydrodesulfurized 64742-81-0 0% TO 100% Not Listed
- Naphthalene 91-20-3 0% TO 0.5% Not Listed
- Ethylbenzene 100-41-4 0% TO 0.5% Not Listed
- Kerosine (petroleum) 8008-20-6 0% TO 100% Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

- Kerosine, hydrodesulfurized 64742-81-0 0% TO 100% Not Listed
- Naphthalene 91-20-3 0% TO 0.5% Not Listed
- Ethylbenzene 100-41-4 0% TO 0.5% Not Listed
- Kerosine (petroleum) 8008-20-6 0% TO 100% Not Listed

United States - Pennsylvania**Labor****U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List**

- Kerosine, hydrodesulfurized 64742-81-0 0% TO 100% Not Listed
- Naphthalene 91-20-3 0% TO 0.5%
- Ethylbenzene 100-41-4 0% TO 0.5%
- Kerosine (petroleum) 8008-20-6 0% TO 100% Not Listed

United States - Rhode Island**Labor****U.S. - Rhode Island - Hazardous Substance List**

- Kerosine, hydrodesulfurized 64742-81-0 0% TO 100% Not Listed
- Naphthalene 91-20-3 0% TO 0.5% Toxic; Flammable
- Ethylbenzene 100-41-4 0% TO 0.5% Toxic; Flammable
- Kerosine (petroleum) 8008-20-6 0% TO 100% Flammable

Section 16 - Other Information**Preparation Date** ● 4/18/2003**Last Revision Date** ● 11/9/2010

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Key to abbreviations
NDA=No Data Available