



Safety Data Sheet

Jet Fuel

SECTION 1 IDENTIFICATION

Product Name: Jet A Fuel

Synonyms: Commercial Jet Fuel, Jet A, Military Jet A, Turbine Fuel, Aviation Fuel, JP-8

SDS #: F3

Product Use: Fuel

Restrictions on Use: Use only as directed

Manufacturer:

Sinclair Oil Company
P.O. Box 30825
Salt Lake City, Utah 84130

Telephone: **General Information:** (801) 524-2777 **Fax:** (801) 524-2740

Contact person: Jeremiah Webster

Emergency Telephone: 800-424-9300 (CHEMTREC) or (703) 527-3887

SDS Date of Preparation: January 23, 2015

SECTION 2: HAZARDS IDENTIFICATION

Classification:

Physical	Health
Flammable Liquid Category 3	Aspiration Toxicity Category 1 Skin Irritation Category 2 Specific Target Organ Toxicity Single Exposure Category 3 (Nervous System) Carcinogen Category 1A Germ Cell Mutagenicity Category 1B

Label Elements:

Danger!



Hazard Phrases:

Combustible Liquid.
May be fatal if swallowed and enters airways.
Causes skin irritation.
May cause drowsiness or dizziness.
May cause cancer.
May cause genetic defects.

Precautionary Phrases:

Prevention

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood
Keep away from heat, sparks, open flames, and hot surfaces. No smoking.
Keep container tightly closed.
Ground and bond container and receiving equipment
Use explosion-proof electrical, ventilating and lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Avoid breathing vapors, mists or spray.
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves, skin protection and eye protection.

Response

IF SWALLOWED: Immediately call a POISON CENTER or doctor.
Do NOT induce vomiting.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
If skin irritation occurs: Get medical attention.
Take off contaminated clothing and wash it before reuse.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER or doctor if you feel unwell.
IF exposed or concerned: Get medical attention.
In case of fire: Use water fog, carbon dioxide, dry chemical and foam to extinguish.

Storage and Disposal

Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents and container in accordance with local and national regulations.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Chemical name	CAS No.	Concentration
Kerosene	8008-30-6	95-100%
Hydrocarbons C7-C9	68920-06-9	0-15%
Naphthalene	91-20-3	0-3%
Benzene	71-43-2	0-0.2%

SECTION 4 EMERGENCY and FIRST AID PROCEDURES

Eye Contact: Immediately flush eyes with water for several minutes. Get medical attention if irritation persists.

Skin Contact: Remove contaminated clothing and flush skin with water for several minutes. Wash thoroughly with soap and water. Get medical attention if irritation develops or persists. Launder clothing before reuse. Discard contaminated shoes.

Inhalation: Remove to fresh air. If breathing is difficult have qualified personnel administer oxygen. If breathing has stopped, administer artificial respiration. Get medical attention.

Ingestion: Do not induce vomiting. Rinse mouth with water. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration into the lungs. Get immediate medical attention.

Most important symptoms/effects, acute and delayed: May cause eye irritation. Causes skin irritation with redness and drying. Inhalation may cause respiratory irritation and central nervous system effects. Harmful or fatal if swallowed. Aspiration during swallowing or vomiting may cause lung damage. May cause cancer. May cause genetic defects.

Indication of immediate medical attention and special treatment, if necessary: Immediate medical attention is required for ingestion.

SECTION 5 FIRE and EXPLOSION HAZARD DATA

Suitable extinguishing media: Use water fog, alcohol foam, carbon dioxide, or dry chemical. Do not use a steady stream of water. Product may float on the surface of water and create a floating fire hazard.

Specific hazards arising from the chemical: This product is flammable and forms explosive mixtures with air. Vapors are heavier than air and will travel along surfaces to remote ignition sources and flash back. Closed containers may explode if exposed to extreme heat. Combustion may produce carbon oxides and other products of incomplete combustion.

Special protective equipment and precautions for fire-fighters: Firefighters should wear full emergency equipment and a NIOSH approved positive pressure self-contained breathing apparatus. Cool fire exposed container with water. Do not allow run-off from firefighting to enter drains or water courses.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures: Wear appropriate protective equipment. Eliminate ignition sources and ventilate the area with explosion proof equipment. Wash thoroughly after handling.

Environmental hazards: Avoid release into the environment. Report spill as required by local and federal regulations.

Methods and materials for containment and cleaning up: Contain with an inert absorbent and place into a closable container for disposal. Use non-sparking tools and equipment. If spill has not ignited, use water spray to disperse the vapors and protect personnel attempting to stop leak. Prevent entry in storm sewers and waterways. Runoff can cause a fire or explosion hazard in sewers.

SECTION 7 HANDLING and STORAGE

Precautions for safe handling: Avoid contact with the eyes, skin and clothing. Avoid breathing vapors or mists. Wear protective clothing and equipment. Use only with adequate ventilation. Wash thoroughly with soap and water after handling. Keep containers closed when not in use. Keep product away from heat, sparks, flames and all other sources of ignition. Do not permit smoking in use or storage areas. Use with non-sparking tools and explosion proof equipment. Electrically bond and ground containers for transfer.

Do not cut, drill, grind or weld on or near containers, even empty containers. Do not reuse containers. Empty containers retain product residues which can be hazardous. Follow all SDS precautions when handling empty containers.

Refer to OSHA 1910.1028 for requirements for handling and use of benzene.

Conditions for safe storage, including any incompatibilities: Store in accordance with regulations for the storage of flammable liquids. Store in a dry, well ventilated area away from heat, direct sunlight and all sources of ignition. Store away from oxidizers and other incompatible materials. Protect containers from physical damage.

SECTION 8 EXPOSURE CONTROLS and PERSONAL PROTECTION

Exposure Guidelines:

INGREDIENTS

Kerosene
Hydrocarbons C7-C9
Benzene

Naphthalene

EXPOSURE LIMITS

200 mg/m³, skin TWA ACGIH TLV
None Established
1 ppm TWA, 5 ppm STEL OSHA PEL
0.5 ppm TWA, 2.5 ppm STEL ACGIH TLV
10 ppm TWA OSHA PEL
10 ppm, skin TWA ACGIH TLV

29 CFR 1910.1028 is the OSHA regulation on Occupational Exposure to Benzene. Assure compliance with these regulations.

Appropriate engineering controls: Use with local exhaust ventilation to maintain exposures below the occupational exposure limits. Use explosion proof equipment where required

Respiratory protection: If exposures are exceeded, use a NIOSH approved organic vapor respirator appropriate for the form and concentration of the contaminants should be used. Selection of respiratory protection depends on the contaminant type, form and concentration. Select in accordance with OSHA 1910.134 and good Industrial Hygiene practice.

Skin protection: Impervious gloves such as nitrile recommended to prevent skin contact.

Eye protection: Wear chemical safety goggles to avoid eye contact.

Other: Impervious coveralls, apron and boots is required to prevent skin contact and contamination of personal clothing. A safety shower and eye wash should be available in the immediate work area.

SECTION 9 PHYSICAL and CHEMICAL PROPERTIES

Appearance (physical state, color, etc.): Pale yellow

Odor: Aromatic hydrocarbon odor.

Odor threshold: Not available	pH: Not applicable
Melting point/Pourpoint: Not available	Boiling Point: Not available
Flash point: 141.1°F (60.6°C) PMCC	Evaporation rate: Not available
Flammability (solid, gas): Not applicable	
Flammable limits: LEL: 0.6%	UEL: 5%
Vapor pressure: <1 mmHg	Vapor density: <1
Relative density: Not available	Solubility: Not available
Partition coefficient: n-ctanol/water: Not available	Auto-ignition temperature: >410°F (>210°C)
Decomposition temperature: Not available	Viscosity: 1.3-2.4 @ 104°F

SECTION 10 STABILITY and REACTIVITY

Reactivity: This product is not expected to be reactive.

Chemical stability: The product is stable.

Possibility of hazardous reactions: None known.

Conditions to avoid: Keep away from heat and all sources of ignition.

Incompatible materials: Avoid oxidizing agents.

Hazardous decomposition products: Thermal decomposition may yield carbon oxides and other products of incomplete combustion.

SECTION 11 TOXICOLOGICAL INFORMATION

Health Hazards:

Inhalation: Vapors may cause respiratory irritation and central nervous system effect including headache, dizziness, headaches, giddiness, euphoria, vertigo, blurred vision, nausea, numbness, drowsiness, anesthesia, and coma. . Overexposure to benzene by inhalation may cause exhilaration, nervous excitation, and/or giddiness, followed by a period of depression, drowsiness, or fatigue, tightness of the chest, unconsciousness, tremors or death.

Skin Contact: Skin contact may cause irritation, redness and defatting of the skin.

Eye Contact: Eye contact may cause mild irritation with redness, tearing and pain.

Ingestion: Swallowing may cause gastrointestinal irritation, nausea, vomiting, diarrhea, vertigo, drowsiness, mental confusion, staggering gait, slurred speech, convulsions, unconsciousness and death due to circulatory failure. Aspiration during swallowing or vomiting may cause lung damage.

Chronic Effects of Overexposure: Prolonged occupational overexposure may cause dermatitis. Reports have associated repeated and prolonged overexposure to petroleum distillates with adverse liver, kidney and bone marrow effects and with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the product may be harmful or fatal. Repetitive direct skin application of kerosene over a two year period resulted in skin cancer in laboratory animals. Petroleum hydrocarbons of similar composition and boiling ranges have been known to product kidney damage and tumors in male rats following prolonged inhalation exposures. Benzene has been shown to cause damage to the blood forming system with anemia, leukopenia and thrombocytopenia by all routes of exposure.

Mutagenicity: Benzene did not induce in vitro mutation in bacteria using standard AMES test conditions. Mammalian cell gene mutation tests carried out in various human, mouse and Chinese hamster cells resulted in mixed results. Benzene is an in vivo mutagen in mammals, especially when chromosomal aberrations and micronuclei are induced. It has been reported that benzene exposure in humans induces genotoxic effects in lymphocytes in vivo.

Reproductive Toxicity: In a reproductive study, rats were administered 250 and 1000 mg/kg of petroleum distillates for at least 70 days prior to mating and during the 14 day mating cycle. The absence of adverse effects on in-life parameters (such as body weight, feed consumption, and clinical observations), a dosage level of 1000 mg/kg/day was considered to be the no-observed-adverse-effect level (NOAEL) for reproductive and systemic toxicity.

Carcinogenicity: Kerosene is listed as a "Confirmed Animal Carcinogen with Unknown Relevance to Humans: A3 by ACGIH. Benzene is listed by IARC as "Carcinogenic to Humans" Group 1, by NTP as "Known to Be a Human Carcinogen" and as a "Confirmed Human Carcinogen", A1 by ACGIH. Naphthalene is listed by IARC as "Possibly Carcinogenic to Humans", Group 2B, as "Reasonably Anticipated to be a Human Carcinogen" and as a "Confirmed Animal Carcinogen with Unknown Relevance to Humans", A3 by ACGIH.

Acute Toxicity Values:

Kerosene: Oral rat LD50 >5000 mg/kg, Inhalation rat LC50 >5.28 mg/L/4 hr, Dermal rabbit LD50 >2000 mg/kg
Hydrocarbons C7-C9: >5000 mg/kg, Inhalation rat LC50 >5.28 mg/L/4 hr, Dermal rabbit LD50 >2000 mg/kg (structurally similar chemical)
Benzene: Oral rat LD50 >2000 mg/kg, Inhalation rat LC50 41690 mg/m³/ 4 hr, Dermal rabbit LD50 > 8260 mg/kg
Naphthalene: Oral rat LD50 533 mg/kg, Inhalation rat LC0 0.4 mg/L (highest attainable concentration), Dermal rat LC50 >2500 mg/kg

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity:

Kerosene: 96 hr LL50 Oncorhynchus mykiss 2.5 mg/kg, 48 hr EL50 1.4 mg/L, 72 hr EL50 Pseudokirchnerella subcapitata 1.3 mg/L

Hydrocarbons C7-C9: 96 hr LL50 Oncorhynchus mykiss 2.5 mg/kg, 48 hr EL50 1.4 mg/L, 72 hr EL50 Pseudokirchnerella subcapitata 1.3 mg/L (structurally similar chemical)

Benzene: 96 hr LC50 Oncorhynchus mykiss 5.3 mg/L, 48 hr EC50 daphnia magna 10 mg/L, 72 hr EC50 Pseudokirchnerella subcapitata 32 mg/L

Naphthalene: 96 hr LC50 Pimephales promelas 6.08 mg/L, 48 hr EC50 daphnia magna 2.16 mg/L

Persistence and degradability: Kerosene is inherently biodegradable.

Bioaccumulative potential: The BCF for kerosene is 70-5000 which suggest the potential for bioconcentration is moderate to high.

Mobility in soil: Some components of kerosene will display low mobility and some will be essentially immobile in soil.

Other adverse effects: This product is classified as toxic to the aquatic environment with long-term adverse effects. Releases to the environment should be avoided.

SECTION 13: DISPOSAL INFORMATION

Waste Disposal Method: Dispose in accordance with all local, state and federal regulations.

SECTION 14: TRANSPORTATION INFORMATION

	UN Number	Proper shipping name	Hazard Class	Packing Group	Environmental Hazard
DOT	UN1223	Kerosene	3	PG III	No
TDG	UN1223	Kerosene	3	PG III	No
IMDG	UN1223	Kerosene	3	PG III	No
IATA	UN1223	Kerosene	3	PG III	No

Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code): Not applicable.

Special precautions: None known.

SECTION 15: REGULATORY INFORMATION

Safety, health, and environmental regulations specific for the product in question.

CERCLA Hazardous Substances (Section 103)/RQ: This product has a Reportable Quantity (RQ) of 3,333 lbs. (based on the RQ for Naphthalene of 100 lbs). Releases above the RQ must be reported to the National Response Center. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

EPA SARA 311 Hazard Classification: Acute Health, Chronic Health, Fire Hazard

SARA 313: This product contains the following chemicals subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372):

Benzene	71-43-2	0-0.5%
Naphthalene	91-20-3	0-3%

CALIFORNIA PROPOSITION 65: This product contains the following chemicals known to the State of California to cause cancer or reproductive toxicity.

Benzene	71-43-2	0-0.5%	Cancer, developmental, male reproductive toxicity
Naphthalene	91-20-3	0-3%	Cancer

WHMIS CLASSIFICATION: Class B, Division 3 (Combustible Liquid), Class D, Division 2A (Very Toxic Material Causing Other Toxic Effects)

This product has been classified in accordance with the hazard criteria in the CPR and the MSDS contains all the information required by the CPR.

Australia AICS: All of the components are listed on the Australian Inventory of Chemical Substances.

Canada DSL: All of the components are listed on the Canadian Domestic Substances List.

China: All the components are listed on Inventory of Existing Chemical Substances in China.

European EINECS: All of the ingredients are listed on the EINECS inventory.

New Zealand: All the components are listed on the New Zealand Inventory of Chemicals.

Philippines: All the components are listed on the Philippine Inventory of Chemical and Chemical Substances inventory.

US EPA Toxic Substances Control Act: All of the components of this product are listed on the TSCA inventory.

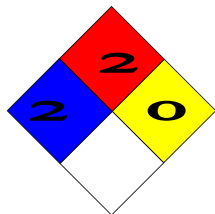
SECTION 16: OTHER INFORMATION

SDS Revision History: Converted to GHS format – all Sections revised

Date of current revision: January 23, 2015

Date of previous revision: New SDS

National
Fire
Protection
Association
(U.S.A)



Health: 2*
Flammability : 2
Instability: 0
Specific Hazard:

Disclaimer: This product material safety data sheet provides health and safety information. The product should be used in applications consistent with this product literature. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to ensure safe workplace operations.

This material safety data sheet is provided in good faith and meets the requirements of the hazardous communication provisions of SARA TITLE III and 29 CFR 1910.1200(g) of the OSHA regulations. The above information is based on

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