SAFETY DATA SHEET

SECTION 1 ◆ IDENTIFICATION

Explorer Pipeline Company 6120 South Yale Ave., Suite 1100 Tulsa, OK 74136	**FOR EMERGENCY SOURCE INFORMATION CONTACT:** ➢ (918) 493 - 5100

GHS PRODUCT IDENTIFIER: Jet Fuel A, Aviation Fuel EPL Code: 51-54, 59	**CHEMICAL FAMILY:** Petroleum Hydrocarbon	**PRODUCT USES:** Used primarily as a fuel source for internal combustion engines.

SECTION 2 ✷ HAZARDS IDENTIFICATION

GHS CLASSIFICATIONS	
Aspiration Hazard - Category 1	Skin Corrosion/Irritation - Category 2
Specific Target Organ Toxicity (Single Exposure) - Category 3	Flammable Liquid - Category 3
Hazardous to the Aquatic Environment – Chronic Hazard - Category 2	

GHS LABEL ELEMENTS

Jet Fuel A

GHS PICTOGRAMS				SIGNAL WORD
				DANGER

HAZARD STATEMENTS	
Causes skin irritation.	May be fatal if swallowed and enters airways.
Flammable liquid and vapor.	May cause irritation of respiratory system.
Toxic to aquatic life with long lasting effects.	May cause drowsiness or dizziness.

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 only non-sparking tools.
Use explosion-proof electrical/ ventilating/ lighting/equipment.	
Take precautionary measures against static discharge.	Keep out of reach of children
Wear protective gloves/protective clothing/eye protection/face protection.	
Wash hands and forearms thoroughly after handling.	Obtain special instructions before use.
Do not breathe mist/vapors/spray.	Use only outdoors or in well-ventilated area.
Do not eat, drink or smoke when using this product.	Avoid release to the environment.
Do not handle until all safety precautions have been read and understood.	

Response
In case of fire: Use water spray, fog, dry chemical fire extinguishers or hand held fire extinguisher.
IF exposed or concerned: Get medical advice/attention.
IF ON SKIN (or hair): Wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing and wash before reuse. If skin irritation occurs, get medical advice/attention.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison control center or doctor/physician if you feel unwell.
Get medical advice/attention if you feel unwell.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do not induce vomiting.

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

Disposal		
Dispose of contents/container in accordance with local/regional/national/international regulations.		
SUPPLIER INFORMATION		
Explorer Pipeline Company	6120 South Yale Ave., Suite 1100	Tulsa, Oklahoma 74136

SECTION 3 ▼ COMPOSITION/INFORMATION OF INGREDIENTS

INGREDIENT	CAS NUMBER	PERCENTAGE (%)
Hydrocarbons with a final boiling point of 572 °F. Primarily Kerosene	Mixed 8008-20-9	100%

SECTION 4 ✚ FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids, Get Medical Aid.

SKIN: Quickly remove contaminated clothing and immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.

INGESTION: Do not induce vomiting. Call a physician and/or transport to an emergency facility immediately.

INHALATION: Get medical aid immediately. Remove from exposure to fresh air immediately. If not breathing, give cardiopulmonary resuscitation. If breathing is difficult, give medical oxygen.

NOTE TO PHYSICIAN: TREAT SYMPTOMATICALLY AND SUPPORTIVELY

SECTION 5 ⌘ FIRE-FIGHTING MEASURES

SEE SECTION 9 FOR FLAMMABILITY PROPERTIES

EXTREMELY FLAMMABLE! This material releases vapors at or below ambient temperatures. When mixed with air in certain proportions and exposed to an ignition source, these vapors can burn in the open or explode in confined spaces. Being heavier than air, flammable vapors may travel long distances along the ground before reaching a point of ignition and flashing back.

SUITABLE EXTINGUISHING MEDIA: Water fog, dry chemical, foam, or Carbon Dioxide. Use water spray to cool nearby containers and structure exposed to fire. Water fog or spray are of value in cooling tanks and containers but may not achieve extinguishment.

HAZARDOUS REACTIONS/DECOMPOSITION: Burning or excessive heating may produce carbon monoxide and carbon dioxide, also other harmful gases/vapors including oxides and/or other compounds of chlorine, manganese, and bromine.

SPECIAL PROTECTIVE ACTIONS FOR FIREFIGHTERS: For fires involving this material, do not enter any enclosed or confined space without proper protective equipment. This may include self-contained breathing apparatus to protect against the hazardous effects of combustion products and oxygen deficiencies. If firefighters cannot work upwind of the fire, respiratory protective equipment must be worn. Cool tanks and containers exposed to fire with water. Burning liquid will float on water. Notify appropriate authorities if liquid enters sewer/waterways.

SECTION 6 ❖ ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS	ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Evacuate personnel to safe areas. Use personal protective equipment. All equipment used when handling the product must be grounded. Ensure adequate ventilation. Take precautionary measures against static discharges. Keep people away from and upwind of spill/leak. Stop leak if you can do so without risk.
METHODS FOR CONTAINMENT	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. Dike far ahead of liquid spill for later disposal.
METHODS FOR CLEANING UP	Use clean non-sparking tools to collect absorbed material. Dike far ahead of liquid spill for later disposal.
OTHER INFORMATION	Water spray may reduce vapor but may not prevent ignition in closed spaces.

SECTION 7 ✂ HANDLING AND STORAGE

Prior to working with this product workers should be trained on its proper handling and storage

PRECAUTIONS FOR SAFETY HANDLING	➢ Use only as an aviation fuel. ➢ Do not siphon by mouth. ➢ Handle as a flammable liquid. ➢ Keep away from heat, sparks, and open flame! Electrical equipment should be approved for classified area. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion. ➢ Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil) is loaded into tanks previously containing low flash point products (such as this product) - see API Publication 2003, "Protection Against Ignitions Arising Out Of Static, Lightning and Stray Currents."
STORAGE PROCEDURES	➢ Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers. ➢ Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition. ➢ Store in a well-ventilated area. This storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". ➢ Avoid storage near incompatible materials.
INCOMPATIBILITIES	➢ Keep away from strong oxidizers.

SECTION 8 ⌗ EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS

Chemical Name	ACGIH TLV (2013)	OSHA PEL	NIOSH IDLH
Kerosene, Petroleum	TWA: 200 mg/M^3 Skin Notation	Not Applicable	Not Applicable

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

PERSONAL PROTECTIVE EQUIPMENT

- **EYES:** Eye protection (ANSI Z87.1 approved) should be worn whenever there is a likelihood of misting or splashing/spraying liquid. Suitable eyewash station should be available. Contact lenses must not be worn.
- **SKIN/BODY:** Chemical protective clothing is recommended based on a thorough PPE hazard assessment. Note: The resistance of specific material may vary from product to product as well as with degree of exposure. Consult manufacturer specifications for specific information.
- **HAND PROTECTION:** Gloves constructed of nitrile, neoprene, or PVC are recommended. Consult manufacturer specifications for specific information.
- **RESPIRATORY PROTECTION:** A NIOSH approved air purifying respirator (APR) with properly selected cartridges may be permissible under certain circumstances where airborne concentrations may exceed exposure limits. Protection provided by APRs is limited, calculate the maximum use concentration for the exposure situation. Use a positive pressure air supplied (Grade D) respirator if there is any potential for an uncontrolled release, exposure levels are not known or any other circumstances where APRs may not provide adequate protection.

- **OTHER HYGIENIC AND WORK PRACTICES:** Safety shower and eyewash or equivalent should be available for emergency use. Use good personal hygiene practices. In case of skin contact, wash with mild soap and water or a waterless hand cleaner. Immediately remove soaked clothing and wash thoroughly before reuse.

SECTION 9 ϟ PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT (760 MM HG): 572 °F/300 °C	**PERCENT VOLATILE BY VOLUME:** Slight - 100%
SPECIFIC GRAVITY (H_2O = 1): 0.775 - 0.840	**VISCOSITY UNITS, TEMP:** 1.5-2.5 cSt @ 37.7 °C
EVAPORATION RATE (BuAc = 1): <1	**VAPOR DENSITY (AIR =1):** >4.5
VAPOR PRESSURE AT 25°C: <2 mm Hg	**SOLUBILITY IN WATER:** Negligible
APPEARANCE AND ODOR: Clear to straw colored liquid; petroleum distillates/kerosene odor.	
FLASH POINT: (Method Used) 100-108 °F/38-42.2 °C	**FLAMMABLE LIMITS:** LEL: 0.7% UEL: 5.0%
AUTOIGNITION TEMPERATURE: 410 °F / 210 °C	**VOC CONTENT:** 100%

SECTION 10 ⌑ STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable under normal temperatures and pressures

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.

MATERIALS TO AVOID: Contact with nitric and sulfuric acids will form nitrocresols that can decompose violently.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

HAZARDOUS POLYMERIZATION: Has not been reported

OTHER PHYSICAL AND CHEMICAL PROPERTIES:

SECTION 11 ❀ TOXICOLOGICAL INFORMATION

KEROSENE

While significant vapor concentrations are not likely, high concentrations can cause respiratory irritation, headache, drowsiness, dizziness, incoordination, disorientation and fatigue. Ingestion can cause irritation of the digestive tract, nausea, diarrhea, and vomiting. Irritating to skin. Repeated or prolonged contact can cause dryness, cracking and dermatitis. Liquid may be absorbed through skin in hazardous amounts if large areas of the skin are repeatedly exposed.

TOXICITY

Type Of Dose	Specie	Result	Type Of Dose	Specie	Result	Type Of Dose	Specie	Result
$LD_{50(oral)}$	Rat	5,000 mg/kg	$LD_{50(dermal)}$	Rabbit	>2,001 mL/kg	$LC_{50(inh)}$	Rat (4 hours)	>5 g/M^3

Specific organ toxicity, single exposure: No data available	Specific organ toxicity, repeated exposure: No data available

CARCINOGENICITY

IARC	Inadequate evidence in animals	Inadequate evidence in humans	Group 3: not classifiable as a human carcinogen
NTP	Not Listed		

California (Prop 65): Not Listed	**NIOSH:** Not Listed	**ACGIH:** A3 - Confirmed animal carcinogen with unknown relevance to humans	**OSHA:** Not Listed

MUTAGENICITY, TERATOGENICITY AND REPRODUCTIVE EFFECTS

Respiratory or Skin sensitization: No data available	Germ cell mutagenicity: Not expected to cause effects
Reproductive toxicity: Not expected to cause effects	Teratogenicity: No data available
Skin Corrosion/irritation: Causes skin irritation and repeated exposure caused dryness and cracking	Serious eye damage, irritation: may cause serious eye irritation
Synergistic effects: No data available	Aspiration hazard: May be fatal if aspirated and enters airway

RTECS #: OA5500000, OA5504000 and SE7548500

SECTION 12 ❋ ECOLOGICAL INFORMATION

KEROSENE

TOXICITY

Type Of Dose	Specie	Result	Type Of Dose	Specie	Result
LC_{50}	Fish	387 mg/L 96 hours	EC_{50}	----------	No Data
EC_{50}	----------	No Data	EC_{50}	----------	No Data

PERSISTENCE AND DEGRADABILITY

Considered inherently biodegradable in the environment.

BIOACCUMULATIVE POTENTIAL

Log P_{ow}	3.3-6	BCF	No Data

MOBILITY IN SOIL

K_{oc} (Soil/water Partition Coefficient)	No Data

SECTION 13 ✱ DISPOSAL CONSIDERATIONS

Not Meant To Be All Inclusive - Check Local, State, And Federal Laws And Regulations

Maximize product recovery for reclaim and reuse. Implement waste minimization principles. EPA U.S. Waste Codes: "Ignitable hazardous waste" (D001), unless proven otherwise. Use approved treatment, transporters, and disposal sites in compliance with all laws.

Waste Disposal Method: Should not be released into the environment.

Contaminated Packaging: Dispose of in accordance with local regulations.

US EPA Waste Number: D001

SECTION 14 ▣ TRANSPORTATION INFORMATION

Not Meant To Be All Inclusive - Check Local, State, And Federal Laws And Regulations

Element	U.S. DOT	IMDG	IATA
UN Number	UN 1863	UN 1863	UN 1863
UN Proper Shipping Name	Fuel, Aviation, Turbine Engine	Fuel, Aviation, Turbine Engine, Marine Pollutant	Fuel, Aviation, Turbine Engine
Hazard Class	3	3	3
Placard/Label		IMDG	
Environmental Hazard	Yes	Yes	Yes
Packing Group	III	III	III

SECTION 15 ☽ REGULATORY INFORMATION

Agency	Listing Guidance only, consult specific regulations
OSHA	All ingredients are listed as hazardous under 29 CFR 1910.1200
CERCLA RQ's (40 CFR Part 102)	
TSCA 8(a)	All ingredients are listed or exempted
TSCA 8(b)	All ingredients are listed or exempted
SARA (40 CFR Part 355) TPQ's	None of the ingredients are listed
SARA 302/304/311/312 extremely hazardous substances	None of the ingredients are listed
SARA 302/304 emergency planning and notification	None of the ingredients are listed
SARA 302/304/311/312 hazardous chemicals	N SARA Title III, Section 312 reporting threshold of 10,000 pounds one of the ingredient is listed
RCRA	Waste with a flashpoint <140 °F is a characteristic waste with an EPA waste code of D001
State Regulations: Massachusetts, New Jersey, and Pennsylvania	All ingredients are listed
SARA 311/312 SDS distribution - chemical inventory - hazard identification	SARA Title III, Section 312 reporting threshold of 10,000 pounds
EPA Form R Toxic Chemical Release Inventory	Not listed
Clean Water Act (CWA) 307	Not listed
Clean Water Act (CWA) 311	Refer to 40 CFR 109, 110, and 112 for SPCC requirements
Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)	Not listed
Clean Air Act Section 602 Class I Substances	Not listed
Clean Air Act Section 602 Class II Substances	Not listed

SECTION 16 ⌘ OTHER INFORMATION

NFPA LABEL

HMIS III LABEL

Personal Protection Index

NPCA recommends that PPE codes be determined by the employer, who is familiar with the actual conditions under which chemicals in the facility are used.

Acronym List

°F=degrees Fahrenheit	°C=degrees Celsius	ACGIH= American Conference of Industrial Hygienists
APR=Air Purifying Respirator	BCF= Bioconcentration Factor	BuAc=Butyl Acetate
CANUTEC= Canadian Transport Emergency Centre	CAS=Chemical Abstract Service	CERCLA= Comprehensive Environmental Response, Compensation, and Liability Act

CHEMTREC= Chemical Transportation Emergency Center	CNS=Central Nervous System	CWA=Clean Water Act
DOT=Department of Transportation	EC50= Effective Concentration Fifty	EPA=Environmental Protection Agency
g/Kg=Grams per Kilogram	g/M^3=Grams per Cubic Meter	GHS=Global Harmonization System
H_2O=Water	HAP=Hazardous Air Pollutants	HMIS= Hazardous Materials Identification System
IARC= International Agency for Research on Cancer	IATA= International Air Transport Association	IMDG= International Maritime Dangerous Goods
LC_{50}=Lethal Concentration Fifty	LD_{50}=Lethal Dose Fifty	LEL=Lower Explosive Limit
Log P_{ow} =Octanol/water partition coefficient	mg/Kg=Milligrams per Kilogram	mg/L=Milligrams per Liter
mL/Kg=Milliliters per Kilogram	mm HG=millimeters of mercury	NFPA=National Fire Protection Association
NIOSH= National Institute for Occupational Safety and Health	NTP=National Toxicology Program	OSHA=Occupational Safety and Health Administration
PEL=Permissible Exposure Limit	ppm=Parts per Million	RCRA=Resource Conservation and Recovery Act
RQ=Reportable Quantities	RTECS=Registry of Toxic Effects of Chemical Substances	SARA= Superfund Amendments and Reauthorization Act
SDS=Safety Data Sheet	SETIQ= Emergency Transportation System for the Chemical Industry; Mexico	STEL=Short Term Exposure Limit
TLV=Threshold Limit Value	TPQ=Threshold Planning Quantity	TSCA=Toxic Substance and Control Act
TWA=Time Weighted Average	UEL=Upper Explosive Limit	VOC=Volatile Organic Compounds

SDS REVISIONS: Reformatted to meet GHS Requirements

SDS CREATION DATE: 04/29/14 **REVISION #0:** 07/31/14

DISCLAIMER

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SDS DEVELOPER: Cass Willard

Cass Willard, CIH

DATE: 07/31/14