



MATERIAL SAFETY DATA SHEET		PR/EHD/OH/F-310 (A)	
PRODUCT NAME : JET A-1			بترو رايغ Petro Rabigh
MSDS Reference No. MSDS-09-0005	REV NO. 1.3 April 21, 2019	Page 1 of 4	

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT DESCRIPTION	JET A-1		
CHEMICAL FAMILY	Aviation Fuels, Kerosene (petroleum)	24-HOUR EMERGENCY TELEPHONE NUMBERS	
GRADE NAME	A-418	Asia Pacific (except China):	CareChem: +65 3158 1074
CHEMICAL FORMULA SYNONYMS	Dual Purpose Kerosene (DPK), Turbine Fuel	China off-land:	CareChem: +86 512 8090 3042
		Europe, America, Middle East & Africa (English):	CareChem: +44 (0) 1235 239 670
		US and Canada (English):	ChemTrec: 1-800-424-9300
		Outside asbove area (English):	ChemTrec: +703-527-3887
MANUFACTURER'S NAME AND ADDRESS	Rabigh Refining and Petrochemical Company		
	PO Box 101, Rabigh 21911 Kingdom of Saudi Arabia.	Tel:	+966 12 425-0390
E-mail for person responsible for this MSDS:	dallaisx@petrorabigh.com		
		Free number:	800 440 9000

SECTION 2 – COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENTS	% (by volume)	CAS #	EINECS #	HAZARD SYMBOL	RISK & SAFETY PHRASES
Kerosene	Not Available	8008-20-6	232-366-4		R10, R36, R38, R65, R51/53 S2, S23, S24, S43, S61, S62
Aromatics	Max 25.0	-	-		
Hydrogen Content	Min 13.4%wt	-	-		
Total Sulfur	Max 0,3%wt	-	-		
Sulfur, Mercaptans	Max 0.002%wt	-	-		

Note: This product is considered hazardous under OSHA 29 CFR 1910.1200.

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Flammable Harmful if swallowed - aspiration hazard. Likely to cause eye and skin irritation. Toxic fumes may be evolved on burning or exposure to heat.

ROUTES OF ENTRY: Inhalation and Ingestion of vapors and mist.

POTENTIAL HEALTH EFFECTS:

Inhalation: Vapors and mist cause irritation, to the respiratory tract, headache, dizziness, euphoria, loss of balance and coordination.

Skin: Cause irritation. Prolonged contact, as with clothing wetted with material, may cause more severe irritation, discomfort, seen as local redness and swelling, defatting of skin, and aggravate an existing dermatitis (skin condition).


Eyes: May cause irritation, experienced as mild discomfort and seen as slight excess redness of the eye.

Ingestion: Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea. Aspiration may occur during swallowing or vomiting, resulting in lung damage.

Carcinogenicity: Not listed as carcinogen by NTP and OSHA. Listed as animal carcinogen (A3; total hydrocarbon vapor) by ACGIH. IARC has listed kerosene as a probable human carcinogen (2A). NIOSH recommends that whole diesel engine exhaust be regarded as a potential occupational carcinogen.

Aggravation of Pre-Existing Medical Conditions: Irritation from skin exposure may aggravate existing open wounds.

SECTION 4 - FIRST AID MEASURES

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MSDS Reference No. MSDS-09-0005	REV NO. 1.3 April 21, 2019	Page 2 of 4	

Inhalation: Remove to fresh air. If the victim has breathing difficulty or is dizzy and unresponsive give 100% oxygen or Cardio Pulmonary Resuscitation (CPR). Rush to nearest medical facility.

Skin: Remove any contaminated clothing. Thoroughly rinse the skin with mild soap and water. If persistent irritation occurs, obtain medical attention. On contact with molten product immediately immerse in or flush with large amounts of cold water to dissipate heat. Do not attempt to remove the material or clothes sticking to the skin. Obtain medical help.

Eyes: Check for and remove contact lenses if worn. Immediately flush eyes with running water for minimum of 15 minutes with eyelids open. Transport to nearest medical facility for additional treatment.

Ingestion: Although first aid is normally not required, do not induce vomiting. If victim is alert, rinse mouth. Do not give liquids to a drowsy, convulsing or unconscious person. Transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below the hips to prevent aspiration.

SECTION 5 - FIRE FIGHTING MEASURES

Flash Point/Range: Min 38°C (Min 100°F)

Flammable Range: Not available. Flammable in open flames and sparks.

Auto ignition Temperature: Not Available

General Hazards: Vapors and mist may be ignited rapidly when exposed to heat, spark, open flame or other source of ignition. Flowing product may be ignited by self-generated static electricity. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.

Extinguishing Media: Use water spray to blanket fire, cool fire exposed containers, and to flush non-ignited spills away from fire.

Small Fires: Any extinguisher suitable for Class B fires, dry chemical, CO₂, water spray, fire fighting foam.

Large Fires: Water spray, fog or fire fighting foam. Never use water jet. May only be used to cool fire-exposed containers.

Fire Fighting Procedures: Wear full protective clothing and self contained breathing apparatus with a full piece operated in a positive pressure mode. Evacuate the area of non essential personnel. Stay upwind and fight fire from safe distance. Keep the adjacent containers cool by spraying water. Water in a straight hose stream may cause fire to spread and should be used as a cooling medium only.

Unusual Fire and Explosion Hazards: Vapours are heavier than air and may travel a considerable distance to a source of ignition and flash back. Flowing product can generate static electricity and cause a fire or explosion if a spark occurs in a flammable vapour-air atmosphere. When handling, use non-sparking tools, ground and bond all containers.

Hazardous Combustion Products: Combustion will produce carbon and nitrogen oxides and unidentified organic compounds.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Observe relevant local regulations and notify authorities in the event of exposure to general public or environment. Remove all sources of ignition. Spilled material will make the surface extremely slippery so keep walking surface free from material. Wear protective equipment (section 8). Take up with sand or other oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal - caution, flammable vapors may accumulate in closed containers. Response and clean-up crews must be properly trained and must utilize proper protective equipment.

SECTION 7 - HANDLING AND STORAGE


Handling:

Keep in a tightly closed container. Store in a cool, dry, corrosion-proof, ventilated area away from moisture, sources of heat or ignition, combustibles and oxidizers. Protect against physical damage. Avoid dust formation and control ignition sources. Employ grounding, venting and explosion relief provisions in accord with accepted engineering practices in any process capable of generating dust and/or static electricity. Empty only into inert or non-flammable atmosphere. Emptying contents into a non-inert atmosphere where flammable vapors may be present could cause a flash fire or explosion due to electrostatic discharge. For guidance on PPE selection see Section 8.

Storage:

Store in a cool dry place away from direct sunlight especially for extended storage periods; store rooms should be clean, dry and contaminant free. Keep the containers tightly closed. Storages should be well ventilated and away from incompatibles and sources of ignition. Employ grounding, venting and explosion relief provisions in accord with accepted engineering practices in any process capable of generating dust and/or static electricity. Empty only into inert or non-flammable atmosphere. Emptying contents into a non-inert atmosphere where flammable vapors may be present could cause a flash fire or explosion due to electrostatic discharge.

SECTION 8 - EXPOSURE LIMITS / PERSONAL PROTECTION

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MSDS Reference No. MSDS-09-0005	REV NO. 1.3 April 21, 2019	Page 3 of 4	

COMPONENTS	OSHA PEL (2008)			ACGIH TLV (2008)		
	TWA	STEL	CEILING	TWA	STEL	CEILING
Kerosene	Not Available 100mg/m ³ (NIOSH)	Not Available	Not Available	Not Available	Not Available	Not Available

ENGINEERING CONTROLS: If the operations involve generation of vapors and mist, employ adequate ventilation to keep the airborne vapors and mist below the recommended occupational exposure limits. The use of closed system or adequate general or local exhaust ventilation is recommended. Controls also needed to keep dust concentration below the explosive limits. Storage and material handling areas should have eyewash and safety shower facilities installed.

RESPIRATORY PROTECTION: If engineering controls do not maintain airborne concentrations to a level which is adequate to protect workers health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers.

Generally, when respiratory protection is required, use appropriate NIOSH approved air purifying respirators with organic vapors and mist filter cartridges. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

In case of oxygen deficiency use positive pressure supplied air respirator.

For emergency and other conditions when exposure may be greatly exceeded use an approved positive pressure Self Contained Breathing Apparatus (SCBA).

RESPIRATORY PROTECTION: Respiratory protection is not required unless the product is sprayed or heated. Use NIOSH/MSHA approved respirators when vapors or mist concentrations exceed permissible exposure limits.

SKIN PROTECTION: Wear impervious protective clothing such as nitrile gloves, apron, boots or whole bodysuit, as appropriate.

EYE AND FACE PROTECTION: Wear safety glasses with side shields or goggles when handling this material.

OTHER PROTECTIVE/SAFETY EQUIPMENT: Maintain eye wash fountain, quick drench and safety shower facility at the site of material handling.

WORK/HYGIENIC PRACTICES: Wash hands, forearms and face thoroughly after handling product. Wash hands before eating, drinking and smoking. Launder contaminated clothing before re-use. Maintain PPE in clean and hygienic conditions.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance And Odor: Bright and clear, free from solids and undissolved water at ambient temperature	Vapor Pressure: Not Available
pH: Not applicable	Density (kg/m³) @15°C: Min 775°C, Max 840°C; Lighter than water
Melting Point/Range: Not Applicable	Molecular Weight: Mixture
boiling point/range: Not Available	Solubility In Water: Negligible
Flash Point/Range: Min 38°C (Min 100°F)	Viscosity (cSt @ -20°C): Max 8.0
Flammable Limits/Range: Not Available	Vapor Specific Gravity (Air=1): Not Available; Heavier than air
Autoignition Temperature/Range: Not Available	Evaporation Rate: Not Available, < 1 (n-Butyl Acetate=1)
Percent Volatiles: Not Available	Freezing Point, °C: Max -47.0 Smoke Point, mm: Min 25

SECTION 10 - STABILITY AND REACTIVITY

STABILITY: Stable under normal conditions of use. Reacts with strong oxidizing agents. Protect from high temperature, open flames, sparks, static discharges and incompatible materials (see below).

INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizing agents such as halogens and acids.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Carbon and nitrogen oxides and unidentified organic compounds.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11 - TOXICOLOGICAL INFORMATION

TOXICITY TO ANIMALS:

No data is specifically available for this product and therefore this toxicological information is based on testing completed with the ingredients.


CHRONIC EFFECTS ON HUMANS:

Prolonged and repeated contact with skin can cause defatting and drying of the skin resulting in skin irritation and dermatitis. Prolonged exposure to high vapor and mist concentration can cause headache, dizziness, nausea, blurred vision and central nervous system depression. Target organs include the respiratory tract, nervous system and mucous membranes.

RESPIRATORY EFFECTS: May cause irritation of mucous membranes of the nose, throat and upper respiratory tract.

SENSITIZATION: No information available

REPEATED DOSE TOXICITY: No chronic health effects known

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MSDS Reference No. MSDS-09-0005	REV NO. 1.3 April 21, 2019	Page 4 of 4	

MUTAGENICITY : No information available

CARCINOGENICITY: This mixture may contain chemicals such as benzene that have been identified as carcinogens by NTP, IARC, or OSHA. IARC has listed kerosene as a probable human carcinogen (2A). NIOSH recommends that whole diesel engine exhaust be regarded as a potential occupational carcinogen.

REPRODUCTIVE EFFECTS: No information available.

SECTION 12 - ECOLOGICAL INFORMATION

Do not allow product or runoff from fire control to enter storm or sanitary sewers, lakes, rivers, streams, or public waterways. Block off drains and ditches. Provincial regulations require and federal regulations may require that environmental and/or other agencies be notified of a spill incident. Spill area must be cleaned and restored to original condition or to the satisfaction of authorities.

MOBILITY: No Information Available.

PERSISTENCE AND BIODEGRADABILITY: No Information Available.

BIO-ACCUMULATIVE POTENTIAL: No Information Available.

AQUATIC TOXICITY AND ECOTOXICITY: Product is toxic to aquatic organisms. May cause long adverse effects in the aquatic environment.

SECTION 13 - DISPOSAL CONSIDERATIONS

MATERIAL DISPOSAL METHOD:
Recover or recycle if possible. May be buried at authorized landfill site or be incinerated in a approved chemical incinerator. Waste material disposal should be in accordance with prevailing regional and local regulation. Do not dispose of by uncontrolled incineration or open burning.

CONTAINER DISPOSAL:
Contaminated containers should be cleaned and disposed of in the same manner as the product in accordance with applicable regulations. Dispose in accordance with prevailing regulation preferably through a recognized collector or contractor. The competence of the collector or contractor should be established beforehand.

SECTION 14 - TRANSPORT INFORMATION

DOT (Department of Transportation):
UN 1223, HAZARD CLASS 3; Flammable Liquid; Packing Group III.

PROPER SHIPPING NAME: Kerosene

SECTION 15 - REGULATORY INFORMATION

US Federal regulations: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List, identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 311/312 (40 CFR 372.65) and/or under CERCLA (40 CFR 302.4).

Canadian federal regulations : This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations

REQUIREMENTS OF OTHER COUNTRIES: Local requirements should be consulted and checked.

SECTION 16 - OTHER INFORMATION

HMIS HAZARD RATINGS: HEALTH: 2 , FLAMMABILITY: 2 , REACTIVITY: 0 0 = Minimal, 1 = Slight, 2 = Moderate, 3 = Serious, 4 = Severe	NFPA CODES: HEALTH: 0, FLAMMABILITY: 2 REACTIVITY: 0, SPECIAL: Do NOT use water 0 = Minimal, 1 = Slight, 2 = Moderate, 3 = Serious, 4 = Severe
Current Revision: 1.3	4/21/2019
Previous revision: 1.2	10/31/2018

DISCLAIMER:
The information is based on our current and best knowledge and is intended to describe the product for the purpose of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. Petro Rabigh makes no warranty of any kind, expressed or implied, regarding the accuracy of these data. Petro Rabigh assumes no responsibility for injury from the use of the product described herein.