

**1- IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY  
IDENTIFICATION OF SUBSTANCE**

**JET A-1, Aviation Turbine Fuel**

Alternative Names: Jet Fuel, Kerosene Type Jet Fuel.

**APPLICATION:** It is used as aviation turbine engine fuel.

**COMPANY IDENTIFICATION**

TÜPRAŞ

Turkish Petroleum Refineries Corporation

KÖRFEZ / KOCAELİ

TEL: 0-262 316 30 00 FAX : 0-262 316 30 10-11

**2- COMPOSITION/INFORMATION ON INGREDIENTS  
CHEMICAL COMPOSITION AND HAZARDOUS COMPONENTS**

CAS NO:	EINECS NO:	Chemical Composition	Concentration	Risk Phrases
8008-20-6	232-366-4	It consists of hydrocarbons having carbon numbers predominantly between C9 and C16.	100	Xn;R65

**3- HAZARDS IDENTIFICATION**

**Physical / Chemical hazards :** Extremely flammable.

**Human Health Hazards :** Harmful, may cause lung damage if swallowed. Irritating to skin

**Environmental Hazards :** Toxic to aquatic organisms. May cause long term adverse effects in the aquatic environment.

**4- FIRST - AID MEASURES**

**EYES**

Wash eye thoroughly with copious quantities of water, ensuring eyelids are held open. Obtain medical advice if any pain or redness develops or persists.

**SKIN**

Wash skin thoroughly with soap and water as soon as reasonably practicable. Remove heavily contaminated clothing and wash underlying skin.

**INGESTION**

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If contamination of the mouth occurs, wash out thoroughly with water.

Except as a deliberate act, the ingestion or large amounts of product is unlikely. If it should occur, do not induce vomiting; obtain medical advice.

### INHALATION

If fumes are inhaled the patient should be removed to fresh air and if recovery is not immediate, medical assistance must be called without delay. If breathing has failed respiration must be assisted, preferably by mouth to mouth method.

### MEDICAL ADVICE

Product can be aspirated on swallowing or following regurgitation of stomach contents, and can cause severe and potentially fatal chemical pneumonitis, which will require urgent treatment. Because of the risk of aspiration, induction of vomiting and gastric lavage should be avoided. Gastric lavage should be undertaken only after endotracheal intubation.

### FIRE-FIGHTING MEASURES

For major fires call the Fire Service. Ensure an escape path is always available from any fire.

There is a danger of flashback if sparks or hot surfaces ignite vapour.

Use foam, dry powder or water fog. DO NOT USE water jets.

Fires in confined spaces should be dealt with by trained personnel wearing approved breathing apparatus.

### COMBUSTION PRODUCTS

Toxic fumes may be evolved on burning or exposure to heat.

## 5- ACCIDENTAL RELEASE MEASURES

Any spillage should be regarded as a potential fire risk.

In the event of spillage, remove all sources of ignition and ensure good ventilation.

Wear protective clothing.

Spilled material may make surfaces slippery.

Clean up spilled material immediately.

Contain and recover spilled material using sand or other suitable inert absorbent material.

Recovery of large spillages should be effected by specialist personnel.

It is advised that stocks of suitable absorbent material should be held in quantities sufficient to deal with any spillage which may be reasonably anticipated.

Large and uncontained spillages should be smothered with foam to reduce the risk of ignition.

The foam blanket should be maintained until the area is declared safe.

Protect drains from potential spills to minimise contamination. Do not wash product into drainage system.

Vapour is heavier than air and may travel to remote sources of ignition (eg. along drainage systems, in basements etc)

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If spillage has occurred in a confined space, ensure adequate ventilation and check that a safe, breathable atmosphere is present before entry.

In the case of spillage on water, prevent the spread of product by the use of suitable barrier equipment. Recover product from the surface. Protect environmentally sensitive areas and water supplies.

In the case of spillage at sea approved dispersants may be used where authorised by the appropriate government/regulatory authorities.

Regular surveillance on the location of the spillage should be maintained.

In the event of spillages contact the appropriate authorities.

## 6- HANDLING AND STORAGE

### STORAGE CONDITIONS

Store and dispense only in well ventilated areas away from heat and sources of ignition.

Store and use only in equipment/containers designed for use with this product.

Containers must be properly labelled and kept closed when not in use.

Do not remove warning labels from containers

Empty packages may contain some remaining product. Retain hazard warning labels on empty packages as a guide to the safe handling, storage and disposal of empty packaging.

Do not enter storage tanks without breathing apparatus unless the tank has been well ventilated and the tank atmosphere has been shown to contain hydrocarbon vapour concentrations of less than 1% of the lower flammability limit and an oxygen concentration of at least 20% volume.

### HANDLING PRECAUTIONS

Avoid, inhalation of vapour, mists or fumes generated during use.

Avoid contact with skin and observe good personal hygiene

Avoid contact with eyes. If splashing is likely to occur wear a full face visor or chemical goggles as appropriate.

Do not siphon product by mouth.

Whilst using do not eat, drink or smoke.

Wash hands thoroughly after contact.

Use disposable cloths and discard when soiled. Do not put soiled cloths into pockets.

Take all necessary precautions against accidental spillage into soil or water.

### FIRE PREVENTION

Light hydrocarbon vapours can build up in the headspace of tanks. These can cause flammability/explosion hazards even at temperatures below the normal flash point. (note: flash point must not be regarded as a reliable indicator of the potential flammability of vapour in tank headspaces). Tank headspaces should always be regarded as potentially flammable and care should be taken to avoid static electrical discharge and all ignition sources during filling, ullaging and sampling from storage tanks.

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When the product is pumped (e.g. during filling, discharge or ullaging) and when sampling, there is a risk of static discharge.

Ensure equipment used is properly earthed or bonded to the tank structure.

Product contaminated rags, paper or material used to absorb spillages, represent a fire hazard, and should not be allowed to accumulate. Dispose of safely immediately after use.

Empty containers represent a fire hazard as they may contain some remaining flammable product and vapour. Never cut, weld, solder or braze empty containers.

## 7- EXPOSURE CONTROLS/PERSONAL PROTECTION

### EXPOSURE LIMITS

There is no appropriate occupational exposure limit for this material.

If vapour, mists or fumes are generated, their concentration in the workplace air should be controlled to the lowest reasonably practicable level.

### PROTECTIVE CLOTHING

Wear face visor or goggles in circumstances where eye contact can accidentally occur.

If skin contact is likely, wear impervious protective clothing and/or gloves.

Protective clothing should be regularly inspected and maintained; overalls should be dry-cleaned, laundered and preferably starched after use.

### RESPIRATORY PROTECTION

If operations are such that exposure to vapour, mist or fume may be anticipated, then suitable approved respiratory equipment should be worn.

The use of respiratory equipment must be strictly in accordance with the manufacturers instructions and any statutory requirements governing its selection and use.

## 9- PHYSICAL AND CHEMICAL PROPERTIES

### Typical Values : JET A-1

	<u>Units</u>		<u>Test Method</u>
Physical State		liquid	
Colour		colourless	
Odour		kerosene-like	
Density @15 0C	kg/lt	0.775-0.840	ASTM D 1298
Sulphur	wt %	0.3 max	IP 336 or ASTM D 1266
Boiling point/range,	0C	150-300	ASTM D 86
Flash point	0C	40 min	ASTM D 328 or D 56
Kinematic viscosity @ 20 0C	cSt	2-3.5	ASTM D 445

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**10- STABILITY AND REACTIVITY:** Stable at ambient temperatures. Hazardous polymerisation reactions will not occur.

**CONDITIONS TO AVOID :** Sources of ignition.

**MATERIALS TO AVOID :** Avoid contact with strong oxidizing agents.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Thermal decomposition products will vary with conditions. Incomplete combustion will generate smoke, carbon dioxide hazardous gases, including carbon monoxide.

## 11- TOXICOLOGICAL INFORMATION

### EYES

Unlikely to cause more than transient stinging or redness if accidental eye contact occurs. May be irritating to eyes at high concentrations of vapour, mists or fumes.

### SKIN

Likely to cause skin irritation.

### INGESTION

Unlikely to cause harm if accidentally swallowed in small doses, though large quantities may cause nausea and diarrhoea.

Will injure the lungs if aspiration occurs, eg. During vomiting.

### INHALATION

May cause irritation to eyes, nose and throat due to exposure to vapour, mists or fumes.

## 12- ECOLOGICAL INFORMATION

Spillages may penetrate the soil causing ground water contamination.

This product is inherently biodegradable.

There is no evidence to suggest bioaccumulation will occur.

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.

## 13- DISPOSAL CONSIDERATIONS

Dispose of via an authorised person/licensed waste disposal contractor in accordance with local regulations.

Dispose of product and container carefully and responsibly. Do not dispose of near ponds, ditches, down drains or onto soil. At sea, used or unwanted product should be stored for eventual discharge into port approved waste oil disposal facilities.

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**14- TRANSPORT INFORMATION**

ADR/RID : Kerosene, Flammable Liquid, Class 3, Item 31(c) Hazard Identification No. 30.  
UN : Kerosene, Flammable Liquid, Class 3, Packing Group III, UN Number 1223.  
IATA/ICAO : Kerosene, Flammable Liquid, Class 3, Packing group III.  
IMO : Kerosene, Flammable liquid, Class 3.3, Packing group III,

**15- REGULATORY INFORMATION**

**EU CATEGORY OF DANGER** : Flammable, Harmful, Irritant

**EU LABELLING Symbol:** St. Andrew's Cross

Indication of danger : HARMFUL

**Risk (R) Phrases:**

R10 Flammable.

R38 Irritating to skin.

R65 Harmful: may cause lung damage if swallowed.

**SAFETY (S) Phrases:**

S24 Avoid contact with skin

S23 Do not breathe vapour

S43 In case of fire, use foam/dry powder/CO<sub>2</sub>. Never use water jets.

S62 If swallowed, do not induce vomiting : seek medical advice immediately and show this container or label.

S61 Avoid release into the environment. Refer to special instructions/Safety data sheets.

**16- OTHER INFORMATION**

The information presented about health, safety and environment issues in this safety data sheet was given by considering of best knowledge and reliable sources at the date of its preparation. Although maximum effort was shown, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof.

Health and safety precautions and environmental advice noted in this data sheet may not be accurate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. No statement made in this data sheet shall be construed as a permission, recommendation or authorization given or implied to practise any patented invention without a valid licence. The TÜPRAŞ shall not be responsible for any damage or injury resulting from abnormal use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material.

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