



# ATTOCK REFINERY LTD

## TECHNICAL DATA SHEET

### Jet Fuel (JET A-1)

#### Product Description:

JET A-1 is obtained from the medium fractions that come from atmospheric distillation, which is the first stage of refining crude oil. Jet Fuel manufactured by Attock Refinery Limited is highly refined, homogenous mixture of hydrocarbons that go from C9 to C17 covering boiling range from 140°C to 270 °C. It's colorless or slightly yellow, with an approximate average density of 0.8 kg/L.

Attock Refinery Limited produce Jet aviation fuel oil (JP-1) that's conforms Aviation Fuel Quality Requirements for Jointly Operated Systems (AFQRJOS), DEF STAN 91-091 and ASTM D1655 Standard specifications.

#### Application and Benefits:

Fuel for aviation turbine engines fitted to aircraft. In the arctic, JET A-1 is a liquid fuel that is injected continuously into a combustion chamber in which a constant current of gases is produced at high pressure and temperature. This stream of gas is what generates the jet reaction that propels the aircraft. Its primary function is to supply power to the aircraft. The key parameters are its energy content and the quality of combustion

This product is not to be used as a solvent or cleaning agent; for lighting or brightening fires; as a skin cleaner. Not to be used as a fuel for automotive vehicles. Not to be used to prevent waxing in diesel fuel.

#### Health, Safety and Environment:

Health, safety and environmental information are provided for this product in the Safety Data Sheet. This gives details of the potential hazards, precautions and First Aid measures. Attock Refinery Ltd will not accept liability if the product is used other than in the manner or with the precautions or for the purposes specified

- **Typical information from MSDS**

Do not ingest. Never siphon by mouth. If ingested, do not induce vomiting. Avoid contact with skin and clothing. Wash thoroughly after handling. Avoid contact with eyes. Use only with adequate ventilation.

#### Storage:

All packages should be stored under cover. Keep containers closed and clearly labeled. The storage area should comply with NFPA 407.



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#### Specifications & Typical Value:

TEST DESCRIPTION	UNIT	TEST METHOD	SPECIFICATIONS	MAX / MIN	ARL TYPICAL
Visual Appearance	-	Visual	Clear & Bright	-	Clear & Bright
Colour	-	ASTM D156	Report	-	+29
Particulate, ISO Code and Individual channel count					
>= 4 µm(c)		IP 564	Report	-	16 (545.0)
>= 6 µm(c)					14(110)
>= 14 µm(c)	-				10 (9.2)
>= 21µm(c)					10 (5.5)
>= 25 µm(c)					9 (4.9)
>= 30µm(c)					9 (4.4)
Particulate Contamination,	mg/L	ASTM D5452	1.0	Max	0.60
Total Acidity	mg KOH/gm	ASTM D3242	0.015	Max	0.006
Aromatics	% Vol	ASTM D1319	25.0	Max	17.5
Sulfur, Total	% mass	ASTM D4294	0.30	Max	0.013
Sulfur, Mercaptan	% mass	ASTM D3227	0.0030	Max	0.0003
Non Hydroprocessed Components			Report	-	100
Mildly Hydroprocessed Components			Report	-	Nil
Severely hydroprocessed Comp batch			Report	-	Nil
Synthetic Components			Report	-	Nil
Fatty Acid Methyl Ester (FAME)	mg/kg	ASTM D7797	50	Max	Not Measured
Initial Boiling Point			Report	-	148
10 % Vol. Recovery			205.0	Max	162
20 % Vol. Recovery			Report	-	167
50 % Vol. Recovery			Report	-	185
90 % Vol. Recovery			Report	-	244
End Point			300.0	Max	260
Residue			1.5	Max	0.5
Loss	% Vol		1.5	Max	0.5
Flash Point	°C	IP170	38.0	Min	39.0
Density @ 15°C	Kg/m <sup>3</sup>	ASTM D1298	775.0 - 840.0	-	802.0
Freezing Point	°C	ASTM D2386	-47	Max	-52
Viscosity @ -20 °C	mm <sup>2</sup> /s (cSt)	ASTM D445	8.000	Max	2.900
Specific Energy net	MJ/Kg	ASTM D3338	42.80	Min	43.2
Smoke Point	mm	ASTM D1322	18.0	Min	23.0



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Naphthalenes,	% Vol	ASTM D1840	3.0	Max	1.7
Corrosion, Copper 2 hr @ 100°C	-	ASTM D130	1	Max	1a
JFTOT Control Temperature	°C	ASTM D3241	260	Min	260
Filter Pressure Differential	mm of Hg		25	Max	1
Tube Deposit Rating	Visual		<3	-	1
'Peacock' or Abnormal color deposits	-		None	-	None
Existent Gum	mg/100ml	ASTM D381	7	Max	1
Water Separometer Index, without SDA	-	ASTM D3948	85	Min	99
Water Separometer Index, with SDA	-		70	Min	88
Static Dissipator Additives (Stadis-450)	ppm	-	3.0	Max	0.6
Electrical Conductivity	pS/m	ASTM D2624	50 - 600	-	150 - 300

For more Information Please Contact **Attock Refinery Ltd.** Phone: 92-51-5487041 / Ext. 2596 / 2469