

Specification: Aviation Turbine Fuel (Jet A1)

1	Appearance			
1.1	Visual Appearance	Clear & Bright, free from solid matter & undissolved water at ambient temperature		Clear & Bright
1.2	Color	Report	ASTM D 156 or ASTM D 6054	25
1.3	Particulate Contamination, at point of manufacture, mg/l	1.0 Max.	IP 423 / ASTM D 5425	0.80
1.4	Particulate, at point of manufacture			
1.4.1	≥ 4 µµ(c)	Report	IP 564 or IP 565	2500
1.4.2	≥ 6 µµ(c)	Report		950
1.4.3	≥ 14 µµ(c)	Report		99
1.4.4	≥ 21 µµ(c)	Report		22
1.4.5	≥ 25 µµ(c)	Report		15
1.4.6	≥ 30 µµ(c)	Report		10
2	Composition			
2.1	Total Acidity, mg KOH/gm	0.015 Max.	ASTM D 3242	0.009
2.2	Aromatic Hydrocarbon Types			
2.2.1 or	Aromatics % v/v	25 Max.	IP 156 /ASTM D 1319	18.5
2.2.2	Total Aromatics % v/v	26.5 Max.	IP 436 /ASTM D 6379	18.5
2.3	Sulphur, Total % m/m	0.3 Max.	ASTM D 4294	0.25
	Sulphur Mercaptan % m/m	0.003 Max.	ASTM D 3227	0.0020
2.4				
Or	Doctor Test	Doctor negative	IP 30	
2.5				
2.6	Refining Component, at the Point of manufacture			
2.6.1	1. Hydroprocessed component, % v/v	Report		
2.6.2	2. Severely Hydro processed component, % v/v	Report		
3	Volatility			
3.1	Distillation – IBP °C,	-	ASTM D 86	155
	Fuel recovered 10% by volume at °C	205 Max.	-	171
	Fuel recovered 50% by volume at °C	Report	-	195
	Fuel recovered 90% by volume at °C	Report	-	195
	Final boiling point °C	300 Max.	-	254
	Residue % volume	1.5 Max.	-	1.0
	Loss % volume	1.5 Max.	-	1.0
3.2	Flash point °C	38 min	IP 170	42
3.3	Density @ 15 °C kg/m3	Min 775.0 Max.840.0	IP 365/ ASTM D 4052	799
4	Fluidity			
4.1	Freezing point, °C	Minus 47 Max.	IP16/ ASTM D 2386	Minus 52
4.2	Kin. Viscosity at minus 20 °C, mm ² s	8.00 Max.	IP 71/ ASTM D 445	4.10
5	Combustion			
5.1	Smoke Point, mm or	25 Min	ASTM D 1322/IP 57	24
	Smoke Point	19 Min	ASTM D 1322/IP 57	
	And Naphtalene, % vol.	3 Max.	ASTM 1840	2.3
5.2	Specific Energy MJ/kg, Min	42.8	Annex C	43.27
6	Corrosion			
6.1	Cu strip for 2 hours @ 100 °C	Not worse than No. 1	ASTM D 130	No.1
7	Thermal Stability, JFTOT			
7.1	Thermal Stability, JFTOT		IP 323 / ASTM D 3241	
	Test Temperature, °C	Min 260		
7.2	Tube rating, visual	Less than 3 (no peacock) or abnormal colour		Zero, no peacock