

COMMERCIAL AVIATION

Jet A-1

Aviation Turbine Fuel — Commercial

PRIMARY SPEC

DEF STAN 91-091 / ASTM D1655

NATO CODE

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DOCUMENT

TDS · Rev. 2026-07

PRODUCT OVERVIEW

Jet A-1 is a kerosene-grade aviation turbine fuel meeting DEF STAN 91-091 and ASTM D1655. It is the global standard for commercial jet aircraft, used by airlines and operators worldwide.

Typical applications: Commercial airlines · Business aviation · Cargo · Charter operations

KEY TECHNICAL PROPERTIES

PROPERTY	LIMIT / VALUE	TEST METHOD
Specification	DEF STAN 91-091 / ASTM D1655	—
Flash Point (min)	38°C (100°F)	IP 170 / ASTM D56
Freeze Point (max)	−47°C (−53°F)	ASTM D2386 / IP 16
Density at 15°C	0.775–0.840 kg/L	ASTM D4052 / IP 365
Net Heat of Combustion (min)	42.8 MJ/kg	ASTM D4809
Total Sulfur (max)	0.30% mass	ASTM D4294
Mercaptan Sulfur (max)	0.002% mass (20 ppm)	ASTM D3227
Aromatics (max)	25% volume	ASTM D1319
Naphthalenes (max)	3.0% volume	ASTM D1840
Kinematic Viscosity at −20°C (max)	8.0 cSt	ASTM D445
Distillation 10% Recovery (max)	205°C	ASTM D86
Distillation Final BP (max)	300°C	ASTM D86
Thermal Stability JFTOT ΔP (max)	25 mm Hg at 260°C	ASTM D3241
Copper Corrosion 2h/100°C (max)	Class 1	ASTM D130
Existent Gum (max)	7 mg/100 mL	ASTM D381
Smoke Point (min)	25 mm (or 19 mm + naphthalenes ≤3%)	ASTM D1322
Water Separation Index (min)	70 / 85 (with additive)	ASTM D3948
Electrical Conductivity	50–600 pS/m (with SDA)	ASTM D2624
Color	Straw to clear	Visual

QUALITY & SUPPLY NOTES

Additives per DEF STAN 91-091 Annex A: antioxidants, SDA, CI/LI (mandatory), FSII optional. CoA supplied with each delivery.

Values shown are typical specification limits for guidance. Batch CoA prevails. Suat Fuels supplies certified product with full documentation at 2,200+ airports worldwide.