



# U. S. Oil & Refining Co.

3001 Marshall Avenue, Tacoma, Washington, 98421 (253) 383-1651

## Aviation Turbine Fuel, Jet A-1 Product Specification

Tests	ASTM Method	Specifications	
		Min.	Max
Total Acid Number, mg KOH/g	D-3242		0.10
Aromatic, volume %	D-1319		25
Naphthalenes, volume %	D-1840		3.0
Mercaptan sulfur, mass %, or Doctor Test	D-3227		0.003 <sup>1</sup>
Sulfur, mass %	D-4294		0.30
Distillation	D-86		
10% Recovered, °C			205
50% Recovered, °C		Report	
90% Recovered, °C		Report	
Final Boiling Point, °C			300
Residue, volume %			1.5
Loss, volume %			1.5
Flash Point, Tag Closed, °C	D-56	38	
Density @ 15°C, kg/m <sup>3</sup>	D-4052	775	840
API gravity @ 60°F, °API	D-4052	36.8	51.0
Freezing Point, °C	D-2386		-47
Viscosity @ -20°C (-4°F), mm <sup>2</sup> /s	D-445		8.0
Net Heat of Combustion, MJ/kg	D-3338	42.8	
Smoke Point, mm	D-1322	25 <sup>2</sup>	
Corrosion, Copper Strip @ 100°C	D-130		1B
Thermal Stability @ 275°C <sup>3</sup>			
Change in pressure, mm of Hg (kPa)	D-3241		25 (3.3)
Preheater deposit, code	D-3241		<3
Existent Gum, mg/100ml	D-381		7
Microseparometer, Rating	D 3948	85	
w/Antioxidant & w/o SDA			
Antioxidant, UOP 344 mg/L			24.0

Meets or exceeds: ASTM D-1655

1) The Mercaptan sulfur determination may be waived if the fuel is considered negative by the doctor test described in the ASTM specification D4952

2) Fuels having a smoke point less than 25 but not less than 18 and a maximum of 3 volume % of naphthalenes are permitted, provided the supplier (seller) notifies the purchaser of the volume, distribution and smoke point and naphthalene content within 90 days of date of shipment unless other reporting conditions are agreed to by both parties.

3) D-1655 specifies JFTOT temperature at 260°C. JFTOT is performed at 275°C to comply with other product requirements.