

**TABLE 1 Detailed Requirements of Aviation Turbine Fuels**

Property		Jet A or Jet A-1	Test Methods
<b>COMPOSITION</b>			
Acidity, total mg KOH/g	max	0.10	D3242/IP 354
1. Aromatics, percent by volume	max	25	D1319 or IP 156
2. Aromatics, percent by volume	max	26.5	D6379/IP 436
Sulfur, mercaptan, <sup>C</sup> percent by mass	max	0.003	D3227/IP 342
Sulfur, total percent by mass	max	0.30	D1266, D2622, D4294, D5453, or IP 336
<b>VOLATILITY</b>			
Distillation temperature, °C:			D86, <sup>D</sup> D2887/IP 406, <sup>E</sup> D7345 <sup>F</sup> , IP 123 <sup>D</sup>
10 % recovered, temperature	max	205	
50 % recovered, temperature		report	
90 % recovered, temperature		report	
Final boiling point, temperature	max	300	
Distillation residue, %	max	1.5	
Distillation loss, %	max	1.5	
Flash point, °C	min	38 <sup>G</sup>	D56, D93, <sup>H</sup> D3828, <sup>H</sup> IP 170 <sup>H</sup> or IP 523 <sup>H</sup>
Density at 15 °C, kg/m <sup>3</sup>		775 to 840	D1298/IP 160 or D4052 or IP 365
<b>FLUIDITY</b>			
Freezing point, °C	max	-40 Jet A' <sup>I</sup>	D5972/IP 435, D7153/IP 529, D7154/IP 528, or D2386/IP 16
		-47 Jet A-1' <sup>I</sup>	
Viscosity -20 °C, mm <sup>2</sup> /s <sup>J</sup>	max	8.0	D445/IP 71, Section 1 or D7042 <sup>K</sup>
<b>COMBUSTION</b>			
Net heat of combustion, MJ/kg	min	42.8 <sup>L</sup>	D4529, D3338, D4809, or IP 12
One of the following requirements shall be met:			
(1) Smoke point, mm, or	min	25.0	D1322/IP 57
(2) Smoke point, mm, and	min	18.0	D1322/IP 57
Naphthalenes, vol, %	max	3.0	D1840
<b>CORROSION</b>			
Copper strip, 2 h at 100 °C	max	No. 1	D130/IP 154
<b>THERMAL STABILITY</b>			
(2.5 h at control temperature of 260 °C min)			
Filter pressure drop, mm Hg	max	25	D3241/IP 323
Tube rating: One of the following requirements shall be met: <sup>M</sup>			
(1) Annex A1 VTR, VTR Color Code	Less than	3	
		No peacock or abnormal color deposits	
(2) Annex A2 ITR or Annex 3 ETR, nm average over area of 2.5 mm <sup>2</sup>	max	85	
<b>CONTAMINANTS</b>			
Existent gum, mg/100 mL	max	7	D381, IP 540
Microseparator, <sup>N</sup> Rating			D3948
Without electrical conductivity additive	min	85	
With electrical conductivity additive	min	70	
<b>ADDITIVES</b>			
Electrical conductivity, pS/m			D2624/IP 274