



Irving Oil Limited
Aviation Turbine Fuel (Jet A)
 Commercial Specification (Sunoco East Boston 2010)
 Meets ASTM D1655-18a
 Massachusetts

PO Box 1260
 340 Loch Lomond Road
 Saint John, NB, Canada

Specification		Unit	Test Method	Limits		Notes
				Min	Max	
Appearance		-	D4176	Bright & Clear	-	1
Color (Saybolt)		-	D156 D6045	-		
Acidity, total		mg KOH/g	D3242	-	0.10	
Aromatics		volume %	D1319	-	25.0	
Olefins		volume %	D1319	-	3.0	
Mercaptan Sulfur		mass %	D3227	-	0.003	
Doctor Test		-	D4952	Negative		
Sulfur		mass %	D1266 / D2622 D4294 / D5453	-	0.3	
Distillation	Initial Boiling Point	°C (°F)	D86 D2887 D7345	Report		
	10% Recovered			-	205 (401)	
	50% Recovered			Report		
	90% Recovered			Report		
	Final Boiling Point	-	300. (572)			
	Residue	%	D86 D7345	-	1.5	
Loss				-	1.5	
Flash Point		°C (°F)	D56 D93 D3828	42 (108)	-	
Density @ 15°C		g/mL	D4052	0.775	0.840	
API Gravity		°		Report		
Freezing Point		°C (°F)	D5972 / D7153 D7154 / D2386	-	-40 (-40)	
Viscosity @ -20°C		mm ² /s (cSt)	D445 D7042 / D7945	-	8.0	2
Net Heat of Combustion - Sulfur Free Basis		MJ/kg (BTU/lb)	D4529 D3338 D4809	42.8 (18,400)	-	
Smoke Point		mm	D1322	18.0	-	
Naphthalenes		volume %	D1840	-	3.0	
Copper Strip Corrosion, 2hr @ 100°C (212°F)		No.	D130	-	1 (a, b)	
Thermal Stability (2.5 h @ 260°C min)	Filter Pressure Drop	mmHg	D3241	-	25.0	3
	Tube Deposits – Annex 1 or,	Code		-	< 3	
	Tube Deposits – Annex 2 or 3	nm		-	85	
Existent Gum		mg/100 mL	D381 / IP540	-	7	
Micro-separometer		Rating	D3948	85	-	
Electrical Conductivity		pS/m	D2624	-	10	4
Antioxidants		mg/L	-	-	24.0	5
Metal Deactivator	Initial	mg/L	-	-	2.0	6
	Cumulative			-	5.7	
Corrosion Inhibitor/Lubricity improver		mg/L	-	-	23	7
Incidental Materials / Non-Conventional Sources		-	-	Report		8
Particulate Contamination		ppm (mg/L)	D5452	-	1	
Filter Color, Dry		Rating		B-3		
Water Reaction	Volume Change	ml	D1094	Report		
	Interface	Rating		Report		
	Separation	-		Report		



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Notes:

1. The Aviation Turbine Fuel shall be bright and clear (B & C), visually free of undissolved water, sediment and suspended matter.
2. The unit for kinematic viscosity is "square millimeter per second", which is equivalent to a centiStokes (i.e. $1 \text{ mm}^2/\text{s} = 1 \text{ cSt}$).
3. No Peacock or abnormal color deposits shall be observed for tube ratings by D3241 Annex 1 VTR. Tube deposit ratings shall be measured by D3241 Annex 2 ITR or Annex 3 ETR when available.
4. The conductivity applies to the product at the point, time, and temperature of delivery.
5. When required, approved antioxidants listed in ASTM D1655 will be used and declared.
6. When required, a metal deactivator additive as described in ASTM D1655 shall be used and declared.
7. When required, approved additives for corrosion inhibitor and lubricity improver listed in D1655 shall be used and declared.
8. Incidental materials such as FAME are not an approved additive for Jet fuel. An accepted level by approval authorities as the functional definition of "nil addition" is $<50\text{mg/kg}$ FAME per D7797/IP583, IP585/ IP590, IP599.