

TYPICAL SPECIFICATION OF AVIATION KEROSENE JET A-1

PROPERTY	UNITS	LIMITS		TEST METHODS (1)	
				ASTM STANDARDS	IP STANDARDS
Appearance		Clear, bright and visually free from solid matter and undissolved water at ambient temperature.		Visual	
Saybolt color (2)		report		D 156 D 6045	
Particulate contamination (3) or	mg/l	maximum 1,0		D 5452	IP 423
Particles per channel (4) ≥ 4 µm(c) ≥ 6 µm(c) ≥ 14 µm(c) ≥ 21 µm(c) ≥ 25 µm(c)	Particles per channel & ISO code	Channel counts report	ISO Code maximum 19		IP 565 IP 577
≥ 6 µm(c)		report	maximum 17		
≥ 14 µm(c)		report	maximum 14		
≥ 21 µm(c)		report	report		
≥ 25 µm(c)		report	report		
≥ 30 µm(c)		report	maximum 13		
Total acidity	mg KOH/g	maximum 0,015		D 3242	IP 354
Aromatic hydrocarbon types: (5 y 6)					
Aromatics or	% V/V	maximum 25,0		D 1319	IP 156
Total Aromatics	% V/V	maximum 26,5		D 6379	IP 436
Sulfur, Total	% m/m	maximum 0,30			IP 336
Sulfur, Mercaptan (7) or	% m/m	maximum 0,0030		D 3227	IP 342
Doctor Test		Doctor Negative			IP 30
Refining components, at point of manufacture (8):					
Non-hydroprocessed components	% V/V	report			
Severely hydroprocessed components	% V/V	report			
Synthetic components (9)	% V/V	report			
Distillation (10):					
Initial Boiling point	°C	report		D 86	IP 123
10 % V/V recovery	°C	maximum 205.0			
50 % V/V recovery	°C	report			
90 % V/V recovery	°C	report			
End Point	°C	maximum 300.0			
Residue	% V/V	maximum 1,5			
Loss	% V/V	maximum 1,5			
Flash point	°C	minimum 38.0			IP 170
Density at 15 °C	kg/m³	775,0 a 840,0		D 4052	IP 365
Freezing point (11)	°C	maximum -47.0		D 2386	IP 16
Viscosity at -20 °C	mm²/s	maximum 8,000		D 445	IP 71
Smoke point (12) or	mm	minimum 25,0		D 1322	IP 598
Smoke point (12) and	mm	minimum 18,0		D 1322	IP 598
Naphthalenes	% V/V	maximum 3,00		D 1840	
Specific energy	MJ/kg	minimum 42,80		(13)	
Copper corrosion (14)	Class	maximum 1b		D 130	IP 154

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Thermal stability (JFTOT) (15): Test temperature tube rating Tube evaluation, one of the following requirements shall be met (16) (17): 1) VTR or 2) ITR or ETR, average over area of 2.5 mm ²	°C	minimum 260	D 3241	IP 323
		maximum <3. No peacock (P) or abnormal deposits (A)		
	mm	maximum 85		
Pressure differential	mm Hg	maximum 25		
Existent Gum	mg/100 ml	maximum 7		IP 540
Water separation characteristics at point of manufacture (refinery): (18) Microseparometer (MSEP) without SDA or Microseparometer (MSEP) with SDA		minimum 85 minimum 70	D 3948	
Water separation characteristics downstream of the point of manufacture (refinery): (18)				
Microseparometer (MSEP)		minimum 85	D 7224	
Microseparometer (MSEP)		minimum 88	D 8073	IP 624
Electrical conductivity (19) (20)	pS/m	50 a 600	D 2624	IP 274
Lubricity (21)	mm	maximum 0,85	D 5001	
FAME content (22) (23)	mg/kg	Less than 5.0		IP 585 IP 590 IP 599
DRA content (23) (24)	µg/l	nil	D 7872	
Additives (25)		(25)		

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