



**SPECIFICATION FOR AVIATION TURBINE FUEL
(IS 1571 - 2008) (DOMESTIC)
Also Meets Def Stan 91-91 Issue 6 Amendment 1 (UK)**

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Sl.No.	PARAMETER	SPECIFICATION	STD.METHOD	Typical Quality
i)	APPEARANCE			
a)	Visual Appearance	Clear & Bright, free from Solid matter & undissolved water at ambient temperature.		Clear & Bright
b)	Colour	Report	ASTM D 156 Or ASTM D 6045	+25
c)	Particulate Contamination , at point of manufacture, mg/l	1.0 Max	IP 423 / ASTM D 5452	0.80
ii)	COMPOSITION	-	-	
a)	Total Acidity, mg KOH/ gm	0.015 Max.	IS 1448 P ; 113	0.009
b)	Aromatics % v/v,	25 Max.(22 Percent for Defence)	IS 1448 P:23	22.5
c)	Sulphur, Total % m/m,	0.3 Max.	IS 1448 P:23/ ASTM D 4294	0.15
d)	Sulphur Mercaptan, percent by mass or Doctor Test	0.003 Max. or Negative	IS 1448 P 109/ASTM D 3227/ IS 1448 P :19 / IP 30	0.0018
e)	REFINING COMPONENT, AT THE POINT OF MANUFACTURE .			
	1. Hydro processed component, % v/v	Report		-
	2. Severely Hydro processed component, % v/v	Report		35
iii)	VOLATILITY	-	-	
a)	Distillation		ASTM D 86/ IS 1448 P :18	155
1	Initial Boiling Point, at \square °C,	Report		
2	10 percent recovery, at °C, v/v	205.0 Max.	-	171
3	50 percent recovery at °C,v/v	Report		195
4	90 percent recovery at °C, v/v	Report		233
5	Final Boiling Point °C,	300.0 Max.	-	254
6	Residue percent by volume,	1.5 Max.	-	1.0
7	Loss% volume,	1.5 Max.	-	1.0



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b)	Flash Point deg. C.	38 Min.	IP 170	42
c)	Density @ 15 Deg.C kg/m ³	Min 775.0 Max 840.0	IP 365/ ASTM D 4052	799
iv)	FLUIDITY	-	-	-
a)	Freezing point , °C,	Minus 47 Max.	IP 16/ ASTM D 2386	Minus 52
b)	Kin. Viscosity at minus 20°C, mm ^{2/s}	8.00 Max.	IP 71/ASTM D 445	4.10
v)	COMBUSTION			
a)	Specific energy MJ/kg, Min Or Product of API gravity and Aniline point, Max	42.8 4800	IS 1448 P:6 IS 1448 P:3	43.27
b)	Smoke point, mm OR	25 Min.	IS 1448 P:31/ ISP 3014/ ASTM D 1322/IP 57	27
1	Smoke Point,mm and	19 Min	ASTM D 1322/IP 57	-
2	Naphthalene, percent v/v	3.00, Max.	ASTM 1840 / IS 1448 P:118	-
vi)	CORROSION			
	Cu strip corrosion for 2 hrs at 100 deg. C	Not worse than No:1	IS 1448 P : 15/ ASTM D 130	No.1
vii)	Thermal Stability, JFTOT at control Temperature of 260°C		IS 1448 P : 97 , ISO 6294/ IP 323 / ASTM D 3241	
a)	Filter pressure differential, mmHg , Max	25		
b)	Tube Rating, visual	Less than 3, 'No peacock' or 'Abnormal' colour deposits		Zero, No peacock 2.0
viii)	CONTAMINANTS			
a)	Existent gum, mg/100 ml, OR Existent gum with Air, mg /100 ml	7 Max. 7 Max	IP 131 / ASTM D 381/ IS 1448 P: 29 ASTM D 1094	2.1
b)	Water Reaction Interface rating	1b Max.	{Method A}/ IS 1448 P 42	1b
c)	Micro Separator rating at point of Manufacture		ASTM D 3948 / IS 1448 P : 142	95
1)	MSEP without SDA OR	85 Min.		
2)	MSEP without SDA	70 Min		90
ix)	CONDUCTIVITY:			
10.1	Electrical Conductivity PS/m	50 Min 600 Max	IP 274/ ASTM D 2624	450 @ 30°C
11	LUBRICITY Wear Scar Diameter, mm	0.85 max	ASTM D 5001	0.63