

SPECIFICATION FOR AVIATION TURBINE FUEL BIS 1571-2008

S.No	PARAMETER	METHOD	LIMIT
i	Appearance		
	a) Visual appearance	Visual	Clear ,Bright and visually free from solid matter and undissolved water at normal ambient temperature.
	b) Color, Saybolt	ASTM D 156/6045	Report
	c) Particulate contamination at point of manufacture , mg/l, Max	ASTM D 5452 / IP 423	1.0
ii	Composition		
	a) Total acidity , mg KOH/g, Max	IS 1448 P 113	0.015
	b) Aromatics, percent by volume, Max	IS 1448 P 23	25
	c) Total sulfur ,percent by mass, Max	IS 1448 P 34	0.3
	d) Sulfur , Mercaptan, percent by mass, Max OR Doctor test	IS 1448 P 109	0.0030
	e) Refining components at the point of manufacture	IS 1448 P 19	Negative
	1) Hydro processed components in batch, % Vol		Report
	2) Severely hydro processed components, % Vol		Report
iii	Volatility		
	a) Distillation	IS 1448 P 18	
	1) Initial boiling point °C		Report
	2) 10 Percent recovery at °C, v/v, Max		205
	3) 50 Percent recovery at °C, v/v, Max		Report
	4) 90 Percent recovery at °C, v/v, Max		Report
	5) Final boiling point °C, Max		300.0
	6) Residue, percent by volume, Max		1.5
	7) Loss, percent by volume, Max		1.5
	b) Flash point, (Abel) °C, Min	IS 1448 P 20	38
	c) Density at 15°C, kg /m ³ ,	IS 1448 P 16	775.0 - 840.0
iv	Fluidity		
	a) Freezing point , °C, Max	IS 1448 P 11	max - 47.0
	b) Kinematic viscosity at -20 °C, cSt, Max	IS 1448 P 25	8.000
v	Combustion		
	a) Specific energy, MJ/Kg, Min OR Product of API gravity and aniline point, Min	IS 1448 P 06	42.80
	b) Smoke point , mm, Min OR	IS 1448 P 3	4800
	1) Smoke point ,mm, Min and	IS 1448 P 31/ISO 3014	25
	2) Naphthalene, percent v/v, Max	IS 1448 P 31/ISO 3014	19
		IS 1448 P 118	3.00
vi	Corrosion		
	Copper Strip corrosion for 2h at 100°C	IS 1448 P 15	Not worse than No. 1
vii	Thermal stability (JFTOT) at Control temp of 260°C.	IS 1448 P 97/ISO 6294	
	a) Filter pressure differential, mm Hg, Max		25
	b) Tube deposit rating, (Visual)		Less than 3, no peakcock or abnormal color deposits
viii	Contaminants		
	a) Existent gum, mg/100 ml, Max OR Existent gum with air, mg/100 ml, Max	IS 1448 P 29	7
	b) Water reaction	IS 1448 P 42	7
	Interface rating, Max		1b
	c) Microseperometer (MSEP) , Rating at the point of manufacture,	IS 1448 P 142	
	1) Fuel without SDA, Min		85
	2) Fuel with SDA, Min		70
ix	Conductivity		
	Electrical conductivity, ps/m at the point, time and temperature of delivery to the purchaser	ISO 6297	min. 50 - max. 600
x	Lubricity		
	Wear scar diameter, mm, Max	ASTM D 5001	max 0.85
xii	Additives		
	a) Antioxidant, mg/l In hydro processed & synthetic fuels(Mandatory)		min. 17.0 - max. 24.0
	b) Static dissipator, mg/l		
	First Doping Stadis 450		max 3.0
	Re-doping		max 2.0/Cumulative 5.0