This product* meets the specification requirements for Jet A-1 set by AFQRJOS Issue 31, Nov 2019.

The Aviation Fuel Quality Requirements for Jointly Operated Systems (AFQRJOS) for Jet A-1 represent the most stringent requirements of the following two specifications:

a. British Ministry of Defence Standard DEF STAN 91-091/Issue 11, Turbine Fuel, Aviation Kerosene Type, Jet A-1, NATO Code: F-35; JSD: AVTUR, 28 Oct 2019.

b. ASTM D1655-18a Standard Specification for Aviation Turbine Fuels (Latest Issue).

PROPERTY	TEST UNIT	GUARANTEE		LIMIT	TEST METHOD ASTM	IP
Appearance		Clear, bright and visually free from solid matter and undissolved water at normal ambient temperature.			visual	
Colour		Report			D 156 or D 6045	
Particulate Contamination	mg/l	1.0		Max	D 5452	423
Particulate,at point of manufacture,cumulative channel particle counts		Channel Counts	ISO Code			564 565 or 577
≥4µm(c)		Report	Report			
≥6µm(c)		Report	Report			
≥14µm(c)		Report	Report			
≥21µm(c)		Report	Report			
≥25µm(c)		Report	Report			
≥30µm(c)		Report	Report			
Total Acidity	mg KOH/g	0.015		Max	D 3242	354
Aromatics	% vol	25		Max	D 1319	156
Or Total Aromatics	% vol	26.5		Max	D6379	436
Sulphur, Total	% mass	0.30		Max	D 1266 o D 2622 o D 4294 o D 5453	336
Sulphur, Mercaptan	% mass	0.0030		Max	D 3227	342
or Doctor Test		Negative			D 4952	30

PROPERTY	UNIT	GUARANTEE	LIMIT	TEST METHOD ASTM	IP
Non Hydroprocessed components (NOTE C)	% vol.	Report			
Mildly Hydroprocessed components	% vol.	Report			
Severely hydroprocessed components	% vol.	Report			
Synthetic Components	% vol.	Report			
Fatty Acid Methyl Ester	mg/kg	50	Max	D 7797	585,583 590,599
Distillation	°C			D 86 or D 7345	123
Initial Boiling Point	°C	Report			
Fuel Recovered					
10 % vol	°C	205	Max		
50 % vol	°C	Report			
90 % vol	°C	Report			
End Point	°C	300	Max		
Residue	% vol	1.5	Max		
Loss	% vol	1.5	Max		
Flash Point	°C	38 (40)**	Min	D 3828 or D 56	170 or 523
Density at 15°C	kg/m^3	775.0-840.0		D 1298 or D 4052	160 or 365
Freezing Point***	°C	-47	Max	D 2386 or D 5972 or D 7153 D 7154	16 or 435 or 528 or 529
Viscosity at -20°C	cst (mm^2/s)	8.000	Max	D 445 or D 7042 D 7945	71
Specific Energy, net	MJ/kg	42.80	Min	D 3338 or D 4809	12 or 355

PROPERTY	TEST UNIT	GUARANTEE	LIMIT	TEST METHOD ASTM	IP
Smoke Point	Mm	25	Min	D 1322	598
or Smoke Point	Mm	18	Min	D 1322	598
and Naphthalenes	% vol	3.0	Max	D 1840	
Corrosion, Copper Strip, Classification (2 h at 100°C)		1	Max	D 130	154
Thermal Stability (JFTOT) Control Temp.	°C	260	Min	D 3241	323
Filter Pressure Differential	mm Hg	25	Max		
VTR or	Visual	Less than 3, no “Peacock” or “Abnormal” colour deposits.			
ITR or ETR Average over area of 2.5 mm^2	Nm	85	Max		
Existent Gum	mg/100 ml	7	Max	D 381	540
Microseparometer (MSEP) ratings				D 3948	
Fuel With Static Dissipator Additive		70	Min		
Fuel Without Static Dissipator Additive		85	Min		
Electrical Conductivity	pS/m	50-600		D 2624	274
Lubricity (NOTE D) BOCLE wear scar diameter	mm	0.85	Max	D 5001	
ADDITIVES					
Antioxidant In final batch	mg/l	24.0	Max		
Metal Deactivator (Optional)	mg/l				
First Doping		2.0	Max		
Cumulative concentration after field re-doping		5.7	Max		

PROPERTY	TEST UNIT	GUARANTEE	LIMIT	TEST METHOD ASTM	IP
Static Dissipator	mg/l				
First Doping STADIS-450		3.0	Max		
Cumulative concentration after field re-doping		5.0	Max		

(*) This product is produced in İzmit, İzmir and Kırıkkale Refineries.

(**) Results by ASTM D 56 can be 1-2°C above those obtained by ASTM D 3828, IP 170.

(***) If the freezing point of the fuel is very low and cannot be reported when measured by IP 16 the limit is max -65 degrees C. If no crystals appear during cooling of the fuel and when the thermometer indicates a temperature of -65°C, the freezing point shall be recorded as below -65°C. This limit does not apply if the freezing point is measured by IP435/ASTM D5972, IP 529/ASTM D7153, IP528 or ASTM D7154.

NOTE A: The types and concentrations of all additives used are to be shown on refinery Certificates of Quality and other quality documents.

NOTE B: Only those additives approved in DEF STAN-91-091/Issue 10 are permitted.

NOTE C: Severely hydroprocessed components are defined as petroleum derived hydrocarbons that have been subjected to hydrogen partial pressure of greater than 7000 kPa (70bar or 1015 psi) during manufacture.

NOTE D: The requirement to determine lubricity applies only to fuels containing more than 95% hydroprocessed material and where at least 20% of the total fuel volume is severely hydroprocessed and for all fuels containing synthetic components.