



CERTIFICATE OF QUALITY № 23/E from June 26 2020

Product name: Aviation gasoline AVGAS 100 LL
Manufacturing organization: LLC "Ecotechnokhim"
Tank: № 01
Batch: № L02/2020
Weight: 357432,0 kg
Production date: 15.05.2020
Match: ASTM D 910-17

No.	Properties	Unit	Limits	Results*	Method
1	Net heat of combustion	MJ/kg	43,5	43.707	ASTM D4529
2	Knock value, lean mixture Motor Octane Number, MON Aviation Lean Rating	Rating Rating	min 99,6 min 100,0	100 101,07	ASTM D2700 ASTM D2700
3	Knock value, rich mixture Performance number, PN	Rating	130,0	135,8	ASTM D909
4	Sulphur, mass percent	%	max 0,05	<0.0003	ASTM D2622
5	Tetraethyl lead content: TEL Pb	ml TEL/L g/L	min 0.27 max 0,53 min 0,28max 0,56	0.470 0.496	ASTM D3341
6	Colour	-	blue	blue	ASTM D2392
7	Vapor pressure, 38°C	kPa	min38 max49	47.50	ASTM D323
8	Density at 15°C	kg/m ³	report	723.4	ASTM D4052
9	Distillation Initial boiling point 10 % volume at 40 % volume at 50 % volume at 90 % volume at Final boiling point Sum of 10 % + 50 % evaporated temperatures Recovery volume Residue volume Loss volume	°C °C °C °C °C °C °C °C °C °C °C °C	report max 75 min 75 max 105 max 135 max 170 min 135 min 97 max 1,5 max 1,5	32.5 73.0 99.5 102.0 112.0 154.5 171.0 97 1.5 1.5	ASTM D86
10	Freezing point	°C	max [-58]	<-80.0	ASTM D2386
11	Copper strip, 2 h at 100°C	Class	max No 1	1a	ASTM D130
12	Oxidation stability (16 h aging) Potential gum, Lead precipitate,	mg/100 mL mg/100 mL	max 6 max 3	2 <1	ASTM D873
13	Water reaction Volume change	mL	max +/- 2	0	ASTM D1094

* result based on analytical report SP20-01969.001 Re-issue:1 from 26.06.2020 performed by SGS Vostok Limited Laboratory of petroleum products in Saint-Petersburg.

Additive information: The fuel contains 15 mg/kg of additive 2,6-di-tert-butyl-4-methylphenol, the dye anthraquinone bright blue fat-soluble at a concentration of 1.5 mg/l

Checked the correctness of data entry: Head of Laboratory  E.L. Rukolyanskaya

Conclusion: The product complies with the requirements of ASTM D 910

Chief Technologist, LLC "Ecotechnokhim"  E.V. Severyanov