



**ECOTECHNOKHIM**  
PETROCHEMICAL PRODUCTION COMPLEX

ECOTECHNOKHIM, LLC

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### CERTIFICATE OF QUALITY № 24/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:** DEF STAN 91-090 Issue 5

No.	Properties	Unit	Limits	Results*	Method
1	Appearance	-	Clear, bright	Clear, bright	visual
2	Visual Colour	-	Blue	Blue	visual
3	Corrosion Copper strip, 2 h at 100°C	Class	max 1	1a	ASTM D130
4	Density at 15°C	kg/m <sup>3</sup>	report	723.4	ASTM D4052
5	Total Sulphur Content	%	max 0,05	<0.0003	ASTM D2622
6	Existent Gum	Mg/100ml	max 3.0	0.5	ASTM D381
7	Freezing point	°C	max [-58]	<-80.0	ASTM D2386
8	Net heat of combustion	MJ/kg	43,5	43.707	ASTM D4529
9	Reid Vapor Pressure, 37.8°C	kPa	min 38 max 49	47.50	ASTM D 323
10	Knock Rating, lean mixture Motor Octane Number, MON	Rating	min 99,6	100	ASTM D2700
	Performance number, PN	Rating	min 130,0	135,8	ASTM D 909
11	Distillation Initial boiling point	°C	report	32.5	ASTM D 86
	10 % volume at	°C	max 75	73.0	
	40 % volume at	°C	min 75	99.5	
	50 % volume at	°C	max 105	102.0	
	90 % volume at	°C	max 135	112.0	
	Final boiling point	°C	max 170	154.5	
	Sum of 10 % + 50 % evaporated temperatures	°C	min 135	171.0	
	Residue volume	%	max 1,5	1.5	
	Loss volume	%	max 1,5	1.5	
12	Oxidation stability (16 h aging) Potential gum Precipitate	mg/100 mL mg/100 mL	max 6 max 3	2 <1	ASTM D 873
13	Tetraethyl lead content: Pb	g/L	min 0.28 max 0,56	0.496	ASTM D 3341
14	Water Reaction Volume change	mL	max 2	0	ASTM D 1094
15	Lovibond Colour	-	min 1.7 max 3.5	2.0	IP 569

\* 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 DEF STAN 91-090 Issue 5

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