



Warter Group



WARTER FUELS SPÓŁKA AKCYJNA

02-967 Warszawa, ul. Korolowa 60

Quality certificate no.

18OBR_IN/A/126

26-04-2018

Product: Aviation gasoline B 91/115

Specifications according to: WT-06/OBR PR/PD/60 wyd IX

Research unit: WARTER FUELS SPÓŁKA AKCYJNA

Producer: WARTER FUELS SPÓŁKA AKCYJNA

Sample no. 18OBR_IN/314

Lot no: 18/IN/126

Lot size: 70000 l

Tank no: BB 022

Tanker no.

Date of sampling: 24-04-2018 07:00

Date of sample delivery: 24-04-2018

Date of the test: 24-04-2018

FULL SPECIFICATION TEST

No.	Properties	Unit	Results	Limits	Method
1	Appearance	--	pure clear liquid no particles solid and undissolved water in temperature environments		ASTM D 4176-04 (2014)
2	Colour	--	green	green	WT-06/OBR PR/PD/60 WYD IX
3	Motor Octane Number MON	-	98.9	min. 91	ASTM D 2700-17
4	Performance number	-	120.2	min. 115	ASTM D 909
5	Initial Boiling Point	°C	40.9	min. 40	ASTM D 86-17
6	10 %(V/V)	°C	73.8	max. 82	ASTM D 86-17
7	50 %(V/V)	°C	101.4	max. 105	ASTM D 86-17
8	90 %(V/V)	°C	111.4	max. 145	ASTM D 86-17
9	97.5 %(V/V) destyluje do temp.	°C	129.5	max. 180	ASTM D 86-17
10	Final Boiling Point	°C	141.8	max. 180	ASTM D 86-17
11	Residue	%(V/V)	1.1	max. 1.5	ASTM D 86-17
12	Loss	%(V/V)	0.4	max. 1.5	ASTM D 86-17
13	Sulfur	mg/kg	7.2	max. 300	ASTM D 2622-16
14	Lead Content	g/liter	0.47	max. 1.6	ASTM D 5059-14 METODA A
15	Tetraethyl lead content	g/kg	1.01	max. 2.5	GOST 1012-72
16	Density at 15 °C	kg/m ³	727.5		ASTM D 4052-16
17	Specific energy	MJ/kg	43.612	min. 42.947	ASTM D 4529-17
18	Freezing point	°C	<-60	max. -60	ASTM D 2386-15E1
19	Corrosion copper strip 2h at 100 C	klasa	1	max. 1	ASTM D 130-12
20	Existent gum	mg/100ml	1	max. 3	ASTM D 381-12 (2017)
21	Iodine Number	gJ/100g	0.04	max. 2	PN-82/C-04068
22	Aromatic hydrocarbons	%(m/m)	20.9	max. 35	PN-EN 15553:2009
23	Reid vapour pressure at 37,8 C	kPa	34,3	min. 29.3 - max. 48	ASTM D 5191-15
24	Reaction of the water extract	--	neutral	neutral	PN-C-04064:1984
25	Acidity	mgKOH/100cm ³	0.13	max. 0.3	PN-85/C-04066
26	Oxidation stability of gasoline - induction period method	h	>12	min. 12	PN-EN ISO 7536:2011

decision QC:

antiknock compound (ethyl fluid TEL-B) max 2,5 g tetraethyl lead/kg of gasoline - look at the result table

antioxidant additive (2,6-ditertbutylo-4-methylphenol) max 24 mg/l of gasoline - 20 mg/l

anti-electrostatic additive (STADIS 450) max 3,0 mg/l of gasoline - 0,31 mg/l

Corrosion Inhibitor 20mg/l

Performance number rewritten from the laboratory opinion No. 18-005780-0-RDAM-001-00

Intertek Nederland B.V. Office/Laboratory Leerlooierstraat 135, 3194 AB Houwvliet Rt 17-04-2018

colouring additive (green anthraquinone) - 6mk/kg

Aviation gasoline B-91/115 meets WT-06/OBR PR/PD/60 wyd IX

Signature

Date. 24-04-2018

QC: 5, Boguszewska Beata