



QUALITY CERTIFICATE No. 24
Poly-alkyl-benzene tar Grade A
TU 2414-001-91051486-2011

Date of manufacture 11.12.2021 **Product vessel No.** 16
Date of sampling 11.12.2021 **Net weight** 56,900 kg
Test date 11.12.2021 **Rail tank car No.** 76787266

The tests were carried out at the Test Center - Quality Control Department of NNK JSC
 Certificate of accreditation No. ROSS RU.0001.515720 Date of information entry into the register of accredited entities July 29, 2015.

Item No.	Indicator	Standard	Actual	Testing method
1	Overall view	Dark brown to black viscous liquid	Dark brown viscous liquid	TU 2414-001-91051486-2011
2	Density at 20 °C, g/cm ³	0.900-1.100	0.988	GOST18995.1-73, amendm.1-2, Method 1
3	Fractional composition: a) initial boiling point, °C b) 85 % distilled at a temperature, °C	not lower than 150 not higher than 360	227 360	GOST 2177-99 with amendm. 1 Method B
4	Open cup flash point , °C	not lower than 80	130	GOST 4333-2014
5	Relative viscosity at 50°C, degrees	1.0-3.0	1.6	GOST 6258-85
6	Mass fraction of water, %	Absent	absent	GOST-2477-2014
7	Iodine number, g of iodine per 100 g of product	no more than 20.0	9.8	GOST 2070-82 Method A
8	Mass fraction of mechanical impurities, %	no more than 1.00	0.11	GOST-6370-83
9	Copper strip test	test passed	test passed	GOST-6321-92
10	Mass fraction of chlorine, %	no more than 0.2	0.004	TU 2414-001-91051486-2011, p. 5.3

Note: - Polyalkylbenzene tar is used as a collecting agent for coal flotation, as a binder in byproduct cokemaking, as heat carrier for heat-exchange equipment, and also, for export. - Marking, packing, transportation and storage according to GOST 1510

Conclusion: Poly-alkyl-benzene tar Grade A meets the technical specifications of:

TU 2414-001-91051486-2011

The manufacturer guarantees the product quality conformance with this standard, subject to meeting the terms of transportation and storage.

Warranty period of storage: 1 year from the date of manufacture

L.S. Specialist
 /seal /Russian Federation* Samara Region*
 Novokuibyshevsk , Joint Stock Company "Novokuibyshevsk Petrochemical Company "
 For documents*/

/signature/
 (signature)

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Certificate issue date 11.12.2021