



QUALITY CERTIFICATE No. 704

Technical and denatured synthetic ethyl alcohol
B Grade

GOST R 52574-2006 with amendments No. 1, 2

Date of manufacture: December 31, 2021
Date of sampling December 31, 2021
Testing date December 31, 2021

Net volume 7850.23 dal measures
Rail tank car No. 50651850

The tests were carried out at the Testing Center – Quality Control Department of NNK JSC

Certificate of accreditation No. ROSS RU.0001.515720. Date of entry of information into the register of accredited persons July 29, 2015.

Item No.	Name of the indicator	Norm	Actually	Testing method
1	Overall view	Colorless transparent liquid without mechanical impurities	Colorless transparent liquid without mechanical impurities	GOST R 52574-2006, cl. 7.3
2	Volume fraction of ethyl alcohol, %	not less than 99.0	99.8	GOST 3639-79, cl. 2.1
3	Mass concentration of acids as equivalent of acetic acid, mg/dm ³	not more than 7	6	GOST R 57251-2016, cl. 11
4	Volume fraction of acetaldehyde, %	not more than 0.7	0.3	GOST R 52574-2006, cl. 7.6
5	Volume fraction of crotonaldehyde, %	not more than 0.2	less than 0.1	
6	Volume fraction of diethyl ether, %	not more than 1.0	0.1	
7	Mass concentration of dry residue, mg/dm ³	not more than 5	5	GOST R 57251-2016, cl. 4
8	Mass fraction of Bitrex, %	not less than 0.0015	0.0015	GOST R 52574-2006, cl. 7.8

Note. 1. When denaturing technical synthetic ethyl alcohol with bitrex, the volume fraction of crotonaldehyde should not exceed 0.2 %. 2. In the production of technical synthetic ethyl alcohol supplied for export, it is allowed to add acetone not more than 5.0% and/or tertiary butyl alcohol not more than 1.0% and/or isopropyl alcohol not more than 7.0 % in accordance with the specification to the contract. If there is acetone and/or tertiary butyl alcohol and/or isopropyl alcohol in technical synthetic ethyl alcohol, the rate may be reduced by indicator 2 to 85.0 % 3. In the process of production of technical synthetic ethyl alcohol grades A and B, supplied for export, it is allowed to add acetone not more than 5.0 %, and in the production of brand B alcohol – isopropyl alcohol not more than 7.0 % in accordance with the specification to the contract. If there is acetone in alcohol of grades A and B, the rate may be reduced by indicator 2 to 88.0 %, and if there is isopropyl alcohol in grade B alcohol, the rate should be reduced by indicator 2 to 92.0 %.

Conclusion: Ethyl alcohol synthetic technical denatured Grade "B" meets the requirements:

- GOST R 52574-2006 with amendments No. 1, 2

The manufacturer guarantees that the product quality meets the requirements of this standard, compliance with the conditions of transportation and storage.

The warranty period of storage is 1 years from the date of manufacture

L.S. Specialist _____ /signature/
(signature)
Certificate issue date: December 31, 2021

Egorova E.I.
(surname, initials)

/stamp /Russian Federation Samara Region*
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Petrochemical Company*
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