

**Limited Liability Company Shkapovskoe Gas Processing Plant**

Location (address of the legal entity): 452017, Russian Federation, Republic of Bashkortostan, Belebeyevsky district, Priyutovo industrial township, Mira Boulevard, 7A, premises # 2

Address of the place of activity for the production of liquefied petroleum gases: 452026, Russian Federation, Republic of Bashkortostan, Bizhbul'yaksky district, Mikhailovskiy Village Council

**CERTIFICATE No. 1971****Liquefied hydrocarbon fuel gas for municipal consumption, propane-butane technical (PBT) grade, according to GOST 20448-2018**

Designation of documents establishing product requirements:

GOST 20448-2018 "Liquefied petroleum fuel gases for municipal consumption. Technical specifications

OKPD Code 2: 19.20.31

Date of manufacture: 02.12.2021

Batch number: 1971

Batch size (mass): **33.720 t of oil**

Place of sampling (according to GOST 14921): railway tank car 57844540

Date of sampling: 02.12.2021

Test date: 02.12.2021

EAC

Declaration of Conformity  
EAEU No. RU D-RU,AB 04.B.02402/19  
valid until 23.06.2022

Name of the indicator	Testing method	The norm for the EAEU TR 036/2016	The norm according to GOST 20448-2018 for PBT grade	Test result
1. Content of components: the amount of methane, ethane and ethylene, mass fraction, % -the amount of methane, ethane and ethylene, molar fraction, % - the amount of propane and propylene, mass fraction, % - the amount of propane and propylene, molar fraction, - the amount of butanes and butylenes, mass fraction, % - the amount of propane and propylene, molar fraction,	GOST 10679	Not standardized	Not standardized Definition required  Not standardized, Definition required required  maximum 60.0 maximum 54.0	2.17  79.30  18.53
2. The content of hydrogen sulfide and mercaptan sulfur -mass fraction, % -molar fraction, % including hydrogen sulfide -mass fraction, % -molar fraction, %	GOST 22985	maximum 0.013  maximum 0.003	maximum 0.013 maximum 0.009  maximum 0.003 maximum 0.005	0.0018   0.0002
3. Saturated vapor pressure, excess, MPA, at a temperature of plus 45°C	GOST 28656	maximum 1.6	maximum 1.6	1.39
4. Volume fraction of liquid residue at 20°C, %	item 9.2 and Appendix B GOST 20448	maximum 1.8	maximum 1.6	Absence
5. Free water and alkali content	item 9.2 and Appendix B GOST 20448	Absence	Absence	Absence
6. Odor intensity, Point*	GOST 22387.5	3	3	3
7. Density at 15 °C, kg/m <sup>3</sup>	GOST 28656	Not standardized	Not standardized	516.1

**Conclusion:** The quality of the products corresponds to the PBT grade according to the requirements of GOST 20448-2018 "Liquefied petroleum gas for municipal consumption. Specifications"

Additional requirements:

- \* when the mass fraction of mercaptan sulfur is 0.002% or more, it is allowed not to determine the intensity of the odor; if the mass fraction of mercaptan sulfur is less than 0.002% or the odor intensity is less than 3 points, the liquefied gases must be odorized in accordance with the established procedure.
- transportation and storage should be carried out according to the requirements of GOST 1510-84.
- the manufacturer (LLC Shkapovskoe GPP) guarantees that the quality of the product meets the requirements of GOST R 20448-2018 within 6 months from the date of manufacture, subject to the consumer's conditions of transportation and storage.

Head of the production laboratory

/signature/

I.L. Tuchina

Stamp here

Laboratory assistant

/signature/

M.N. Yakovleva

Certificate issue date: 02.12.2021

The certificate cannot be reproduced in its entirety (parts of the certificate cannot be interpreted out of context) without the permission of the laboratory