

**UFAORGSINTEZ PJSC**

450037, Russian Federation, Republic of Bashkortostan, Ufa city

Quality Division, Testing Center for Petrochemical Products, Raw Materials and Environmental Facilities

Unique entry number in the Register of Accredited Entities No. RA.RU.21YΦ03

Laboratory for quality control of the products of petroleum hydrocarbon pyrolysis processes and pyrogas separation

**PASSPORT No. 1-170****ETHYLENE  
GOST-25070-2013**

**Date of sampling** 28.12.2021 **OKPD 2 Code** 20.14.11.121  
**Test date** 28.12.2021 **Net weight** 107.628 t  
**Sampling point** Section of ethylene pipeline sampling point  
shop 2203  
**Designation of the regulatory documentation (RD), according to which the sample was taken** GOST 24975.0

Item No.	Name of the indicator	RD for test method	Norm according to GOST 25070-2013	Analysis result
1	Volume fraction of ethylene, %	GOST 24975.1-2015	minimum 99,9	over 99,99
2	Volume fraction of propylene, %		maximum 0.005	less than 0.0001
3	Volume fraction of methane and ethane, %		maximum 0.1	0.0096
4	Volume fraction of acetylene, %		not more than 0.001	less than 0.0001
5	Volume fraction of diene hydrocarbons (propadiene and butadiene), %		maximum 0.0005	less than 0.0001
6	Volume fraction of carbon dioxide, %		not more than 0.001	less than 0.0001
7	Volume fraction of carbon oxide, %		not more than 0.0005	less than 0.0001
8	Volume fraction of methanol, %		maximum 0.001	less than 0.0001
9	Volume fraction of oxygen in the product supplied via the pipeline, %	GOST 24975.3-81	not more than 0.0002	less than 0.0001
10	Mass concentration of sulfur, mg/m <sup>3</sup>	GOST-24975.2-89	not more than 1	0.376
11	Mass fraction of water, %	GOST-24975.5-91	not more than 0.001 not more than 0.02	0.00004 -
	a) in the product supplied via the pipeline			
	b) in the product supplied in tank cars and balloons			
12	Volume fraction of ammonia, %	GOST 24975.4-89	not more than 0.0001	less than 0.00003

**Conclusion: the product conforms to GOST 25070-2013**

The products are manufactured under the guidance of the Management Systems certified for compliance with the requirements: ISO 9001:2015 Certificate No. 31100600 QM15, ISO 50001:2018 Certificate No. 31100600 EMS18, ISO 14001:2015 Certificate No. 31100600 UM15, ISO 45001:2018 Certificate No. 31100600 OHS 18.

**Scope of application:** intended to be used in production of polyethylene, polyvinyl chloride, ethylene oxide, ethanol, ethyl benzene, acetic aldehyde and other organic products, as well as for refrigeration plants.

**Fire and explosion hazard characteristic:** ethylene is a colorless combustible gas capable of explosive decomposition at overpressure, high temperature or exposure to open flame in the presence of oxygen. Inflammability limits (volume fractions): lower – 2.8%, upper - 36,35%. Autogenous ignition temperature is 427°C.

**Transportation rules:** gaseous ethylene is transported via the pipeline, while the liquified ethylene is transported in special railroad and road tank cars of the consignor (consignee) tailored for pressure. Ethylene balloons shall be transported by railway or by road in the covered vehicles. Ethylene shall be transported and stored in accordance with the requirements of GOST 1510-84 (similar to the hydrocarbon liquified fuel gases), Rules for Design and Safe Operation of Pressure Vessels and Gas Safety Regulations approved by Rostekhnadzor. Transportation by railway and by road shall also be made in compliance with Regulations on the Transport of Dangerous Goods in effect with respect to the said kind of transport.

**Storage regulations:** in accordance with GOST 1510-84, metal high-pressure storage tank may be used for storage. Avoid overheating, impacts on tanks (both full and empty). Incompatible materials in storage - oxidizing agents, toxic gases.

**Neutralization, disposal and dumping of waste:** in case of a small leak, eliminate the leak in compliance with precautionary measures; in case of an intensive leak, in agreement with specialists (fire protection, emergency situations) after determining the gas contamination zone, evacuating people and assessing the possible consequences of volumetric ignition of the gas-air mixture, ignite the escaping gas and let it burn out under the control of water jets; isolate the area until the gas dissipates; do not touch the spilled substance; dump the spill site, prevent the substance from entering reservoirs.

5th grade Laboratory Analyst  
(power of attorney No. 35/21 dated 01.01.2021)

T.V. Shakirova

L.S.

Date of passport registration: 29.12.2021

Seal:  
illegible