



**UFAORGSINTEZ PJSC**

450037, Russian Federation, Republic of Bashkortostan, Ufa city, Quality Management Division  
Laboratory of quality control of ethylene-propylene rubber production



## CERTIFICATE No. 113-2021

### Ethylene propylene diene rubber EPDM-E (ethylene propylene diene monomer-E)

#### TS 20.17.10-100-05766563-2021

Grade	EPDM-E-70 group 2, 2	OKPD 2 Code:	20.17.10.173
Batch No.	106	NET weight:	750 kg
Date of manufacture:	07.08.2021	Number of packages:	30
Date of sampling:	08.08.2021	Briquette numbers	22081-22110
Test date:	09.08.2021		

The designation of the RD according to which the sample was taken GOST 27109

Item No.	Name of the indicator	RD for test method	Norm according to TS	The actual value
1	Mooney viscosity MB (1+4)125 °C*, within, Mooney units	GOST 10722-76, TS 20.17.10-100-05766563-2021 item 5.3	66-75	67
2	The spread of the Mooney Viscosity indicator within the batch, Mooney units	TS 20.17.10-100-05766563-2021 item 5.3	maximum 5	1
3	Mass fraction of ethylene units, %	ASTM D 3900 Method A TS 20.17.10-100-05766563-2021 item 5.4	50-59	-
	Group 1			
	Group 2		60-69	64
	Group 3	70-79	-	
4	Mass fraction of ethyldennorbornene, %	ASTM D 6047, TS 20.17.10-100-05766563-2021 item 5.5	2.0-3.0	-
	Group 1			
	Group 2		3.1-5.0	4.3
	Group 3		5.1-7.0	-
	Group 4	7.1-9.0	-	
5	Weight loss during drying, %	GOST 19338-90, TS 20.17.10-100-05766563-2021 item 5.6	maximum 0.7	0.1
6	Mass fraction of ash, %	GOST 19816.4-91 method A TS 20.17.10-100-05766563-2021 item 5.7, ISO 247-1 Method A	maximum 0.2	Guarantee
7	Mass fraction of vanadium, %	MI-08-5-103-2019 YUL-313	maximum 0.008	0.001
8	Mass fraction of alcohol-toluene extract, %	GOST 19920.6-74, TS 20.17.10-100-05766563-2021 item 5.9	maximum 4.0	guarantee
9	The mass fraction of the antioxidant Irganox-1520L, %	MI-08-5-104-2019 YUL-313	minimum 0.10	0.21
10	Conditional tensile strength with carbon grade P-324 or P-234, MPa	GOST 270-75, TS 20.17.10-100-05766563-2021 item 5.11	minimum 11.0	12.2
11	Elongation at break, %		minimum 350	410

Note: Sample preparation at t=60.0±5.0 °C

**Conclusion:** The product complies with TS 20.17.10-100-05766563-2021

**Not subject to mandatory certification.**

The products are manufactured in accordance with the Management systems certified for compliance with the specifications of: ISO 9001:2015 Certificate No. 31100600 QM15, ISO 14001:2015 Certificate No. 31100600 UM15, ISO 45001:2018 Certificate No. 31100600 OHS18.

**Scope of application:** designed for the manufacture of rubber products.

**Characteristics of fire and explosion hazard:** According to GOST 12.1.044, rubber belongs to the group of solid combustible materials with a high smoke-forming ability. In the process of production and processing, when rubber is heated above 230 °C, it is possible to release volatile products, including marginal (ethane, propane) and unsaturated (ethylene, propylene) hydrocarbons, carbon oxides. Upon contact with an open fire, it ignites without explosion and burns with a smoky flame with the formation of a melt and the release of the above-mentioned thermal degradation products.

**Transportation rules:** All types of transport are covered.

Type of shipment via railroad: carload. When transporting rubber packed in various types of bags in railway wagons, it is loaded into the wagon to full capacity without packaging.

When transporting rubber packed in box pallets in railway wagons, pallets are installed in 2-3 rows in height in accordance with the requirements of GOST 21650.

**Storage rules:** Store the material in paper bags with a polyethylene liner in a dry storage room at a temperature not exceeding 30 °C:

- rubber packed in bags - in stacks no more than 1.2 m high;
- rubber packed in box pallets in stacks by 3-4 pallets in height.

**Neutralization, disposal, and burial of wastes:** Waste unsuitable for recycling does not require neutralization, is subject to removal to places agreed with the bodies of the Ministry of Emergency Situations and Environmental Safety and the Federal Service for Supervision of Consumer Rights Protection and Human Welfare (Department of Rospotrebnadzor).

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

5th grade Laboratory Analyst  
(power of attorney No. 36/21 dated 01.01.2021)

*signature* A.G. Solovyeva

Date of certificate registration: 09.08.2021

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**Stamp:** Quality department