Public Joint Stock Company UFAORGSINTEZ 450037, Russian Federation, Republic of Bashkortostan, Ufa city

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

Laboratory of quality control of ethylene-propylene rubber production



CERTIFICATE No. <u>23-2021</u> Synthetic ethylene propylene diene rubber EPDM TS 2294-087-05766563-2010 with amend. 1-3

Grade	EPDM 90	OKPD 2 Code:	20.17.10.173			
Batch No.	124	Date of issue/re-selection, analysis	21.11.2019/02.01.2021			
Number of packages:	22	NET weight:	550 kg			
Briquette numbers	23367-23388	Designation of the RD according to whi	Designation of the RD according to which the sample was taken GOST 27109			

Item No.			RD for test method	Norm according to TS	The actual value
	Mooney viscosity MB 1+4 (100 °C), Moo	nov units	GOST 10722, TS 2294-087-05766563-2010 with	86-95	92
	within	ncy units,	amend. 1-3, item 5.3	80-93	92
	Mass fraction of dicyclopentadiene units,	%, within	TS 2294-087-05766563-2010 with amend, 1-3,	4.0-7.2	5.0
	, 1	,	MI-08-5-07-2019		
3.	Loss of mass on drying, %, maximum		8, TS 2294-087-057665 <mark>63-2010 with amend</mark> . 1-3,	0.7	0.1
			item 5.5		
4.	Mass fraction of ash, %, maximum		5.4, TS 2294-087-05 <mark>766563-2</mark> 010 with amend. 1-3,	0.2	0.04
			item 5.6		
5.	Mass fraction of vanadium, %, maximum		TS 2294-087-05766563-2010 with amend. 1-3,	0.008	0.003
			MI-08-5-103-2019		
6.	Mass fraction of alcohol - toluene extract,	%, maximum	, TS 2294-087-05766563-2010 with amend. 1-3, item	4.0	1.3
		1.500¥ 0/	5.8	0.10	0.25
	The mass fraction of the antioxidant Irgan	ox-1520L, %,	TS 2294-087-05766563-2010 with amend. 1-3, MI-	0.10	0.25
	minimum		08-5-104-2019	100	2.42
	Conditional tensile strength with technical	carbon grade		190	242
	P-324 (GOST 7885), kgf/cm², minimum		amend. 1-3, item 5.10.3	250	420
	Elongation at break, %, minimum			350	430
	0. Viscosity spread within the batch, Mooney units,		TS 2294-087-05766563-2010 with amend. 1-3, item	5	2
	maximum		5.3.4		
	Mass fraction of propylene units,	l Group	TS 2294-087-05766563-2010 with amend. 1-3,	42-50	-
	group 2, %, within	2 Group	L-124-2014	25-41	39

Conclusion: the product complies with TS 2294-087-05766563-2010 with amend, 1-3. The warranty period of storage is until 21.05.2021

The products are manufactured in accordance with the Management systems certified for compliance with the specifications of: An 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.

Storage rules:

Store the material in paper bags with a polyethylene liner in a dry, ventilated room, excluding direct sunlight, at a distance of at least 1m from heating devices and at a temperature not higher than 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.

Engineer of the laboratory for quality control of ethylene-propylene-rubber products of the Quality Management:

(power of attorney No. 82/21 dated 11.01.2021)

Certificate issue date: February 15, 2021

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, they are loaded into the car 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.

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).

Signature E.F. Dmitrieva

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