



**CERTIFICATE No. \_\_\_\_\_**

**BALEEN  
(POLYPROPYLENE AND PROPYLENE COPOLYMERS)**

**TS 2211-074-05766563-2015 as amended 1**

**Grade** 03003 M1Y **OKPD 2 Code** 20.16.51.190  
**Batch No.** **Net weight**  
**Date of sampling**  
**Test date**

**Designation of the regulatory documentation (RD), according to which the sample was taken** TS 2211-074-05766563-2015 as amended 1

Item No.	Name of the indicator	RD for test method	Norm	Analysis result
1	Melt flow rate (230 °C / 2.16 kg), g/10min	ASTM D 1238	from 0.1 to 0.4	
2	The spread of the melt flow rate within the batch <sup>1</sup> , %	TS 2211-074-05766563-2015, cl. 5.5	not more than 15	
3	Mass fraction of granules with a size of more than 6 to 8 mm and less than 1 mm, as well as stuck together, provided that no more than three granules stick together, %	TS 2211-074-05766563-2015, cl. 1.2	not more than 3	
4	Mass fraction of volatile substances, %	TS 2211-074-05766563-2015, cl. 5.6	not more than 0,09	
5	Resistance to thermo-oxidative aging at 135 °C as to formulation 229 m, hour	TS 2211-074-05766563-2015, cl. 5.9	not less than 4,000	
6	Tensile yield point, MPa	ASTM D 638	not less than 26	
7	Elongation at yield strength, %		not less than 15	
8	Modulus of flexibility, mPa	ASTM D 790	not less than 800	
9	Izod impact toughness of notched sample at 23 °C, J/m	ASTM D 256	not less than 300	
10	Izod impact toughness of notched sample at minus 20 °C, J/m		not less than 30	

**Note:** 1) The indicator is determined by the calculation method.

**Conclusion: the product complies with TS 2211-074-05766563-2015 as amended 1**

**Not under mandatory certification**

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 14001:2015 Certificate No. 31100600 UM15, BS OHSAS 18001:2007 Certificate No. 31100600 BSOH. The minimum required strength (MRS) according to ISO 12162 is 8 MPa (PPR 80).

**Scope of application:** for non-pressure pipelines, pipeline parts, profile extrusion products, sheets, products in contact with food, toys.

**Characteristics of fire and explosion hazard:** pelleted baleen as per GOST 12.1.044 is related to the group of solid combustible materials with high smoke-producing capacity. When baleen heating, during the processing up to temperature up to 150 °C, the formation of products of volatile thermal destruction, which contain organic acids, carbonyl compounds, including formaldehyde, acetaldehyde, carbon oxide. Upon contact with an open fire, the baleen burns with a smoky flame without an explosion with the formation of a melt and the release of carbon dioxide, water vapor, unsaturated hydrocarbons and the above thermal destruction products. Air-borne dry dust of baleen is explosive; the particle friction results in accumulating the charge of static electricity.

**Transportation rules:** baleen is transported by all types of transport in covered vehicles in accordance with the rules of cargo transportation applicable to this type of transport: Baleen packed in bags, when loaded into containers according to GOST 15102 or GOST 20435, is transported in any means of transport. It is allowed, upon agreement with the consumer, to transport in bulk in railway cars and road pneumatic tanks.

**Storage rules:** baleen is stored in closed room while avoiding the exposure of direct sunlight at a distance of not less than 1 m from heating devices at a temperature not more than 30 °C and relative humidity not more than 80 %. Before opening, bags with baleen must be kept in the production room for at least 12 hours. It is allowed to store the baleen at the consumer's for up to 30 days in the outdoor areas installed metal containers for storage, excluding the ingress of moisture and contamination of the product.

**Neutralization, disposal, and burial of wastes:** waste unsuitable for recycling does not require neutralization, and is subject to removal to places agreed with the bodies of the Ministry of Civil Defense, Emergencies and Disaster Relief and the Federal Service for Supervision of Consumer Rights Protection and Human Welfare (Division of the Federal Service for Supervision of Consumers Protection and Welfare (Rosпотребнадзор)).

**Warranty period of storage:** 3 years from the date of manufacture.

Engineer \_\_\_\_\_

L.S.

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Certificate registration date