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 of Quality Control of polyethylene production

CERTIFICATE No. <u>168-2021</u> POLYETHYLENE

GOST 16337-77 with amend. 1-3

OKPD 2 Code

NET weight:

Grade	10803-020, sort 2				
Batch No.	168				
Date of manufacture:	22.11.2021				
Date of sampling:	22.11.2021				
Test date:	22.11.2021				
Design of the second stars descendent of the (DD)					

20.16.10.111 5,000.00 kg

Signature

Designation of the regulatory documentation (RD), according to which the sample was taken

GOST 16337-77 with amend.1–3, Items 2.2, 2.3, 2.10

Item		RD for test method	Norm according to GOST 16337-77			
No.	Name of the indicator	RD for test method	Top grade	Grade 1	Grade 2	Analysis result
1	Density, g/cm ³	GOST 15139-69 with amend. 1, Item 5, GOST 16337-77, Item 3.11	from 0.9170 to 0.9200 (0.9185±0.0015)			guarantee
2	Melt flow rate, g/10min	GOST 11645-73, GOST 16337-77, Item 3.12	from 1.8 to 2.2 from 1.7 to 2.3 (2.0±10%) (2.0±15%)		2.2	
3	The spread of the melt flow rate within the batch, %	GOST 16337-77, item 3.13	±5	±8	±12	5
4	Number of inclusions, pcs.	GOST 16337-77, item 3.14	maximum 2	maximum 5	maximum 15	11
5	Technological test for the appearance of the film	GOST 16337-77 item 3.15	B C			guarantee
6	Cracking resistance, hour	GOST 13518-68	minimum 2			guarantee
7	Tensile yield point, Pa (kgf/cm ²)	GOST 11262-2017 GOST	minimum 93*10 ⁵ (95)			guarantee
8	Tensile strength, Pa (kgf/cm ²)	16337-77, Item 3.17	minimum 122*10 ⁵ (125)			guarantee
9	Elongation at break, %		minimum 550			guarantee
10	Odor and taste of aqueous extracts, points	GOST 22648-77, GOST 16337-77, Item 3.24	maximum 1 -		guarantee	
11	Mass fraction of extractables, %	GOST 26393-84, GOST 16337-77, Item 3.18	maximum 0.9 maximum 1.1		guarantee	
12	Mass fraction of gray granules, %	GOST 16337-77 item 3.9	- maximum 0.1		0.00	
13	Mass fraction of oxidized granules, %	GOST 16337-77 item 3.9	- max		maximum 0.1	0.00
14	Mass fraction of granules of a different color, %	GOST 16337-77 item 1.6	- maximum 0.04		maximum 0.04	0.00
15	Mass fraction of granules over 5 to 8 mm in size, %	GOST 16337-77 item 3.8	maximum 0.25		0.00	
16	Mass fraction of the granules with a size from 1 to 2 mm, %			maximum 0.5		0.0

Conclusion: the product complies with GOST 16337-77 with amend. 1–3

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 EMSt18, ISO 14001:2015 Certificate No.31100600 UM15, ISO 45001:2018 Certificate No.31100600 OHS18.

Scope of Application: Intended for the production of technical devices, devices contacting with food, toys, films and film devices, for the use in medicine (including the production of devices permitted for the packing of drugs) and for agricultural activities.

Characteristics of fire and explosion hazard: Combustible, when heating during the processing above 140 °C and exposure of open flame, volatile products of thermal and oxidative destruction, which contain organic acids, formaldehyde, acetaldehyde, and carbon monoxide, are released. In case of the exposure of open flame, polyethylene inflames without explosion and burns with sooting flame. Aerosol and dry dust of polyethylene are explosive; the particle friction results in accumulating the charge of static electricity.

Transportation rules: It is transported by all types of transport in covered vehicles in accordance with the rules of cargo transportation applicable to this type of transport. When transported by sea, paper bags are enclosed in polyethylene bags; it is allowed to be transported in bulk in railway wagons (model 17-495(917)), tank containers (GOST 26380), special and tank trucks (type K 104OE). Packing shall be done as per GOST 21929, bag sizes shall comply with GOST 24597, and means of fixation shall comply with GOST 21650.

Storage rules: Storage conditions - temperature no higher than 25°C, relative humidity 40-80%. Store in closed room while avoiding the exposure of direct sunlight at a distance of not less than 1m from heating devices. Before opening, bags with polyethylene must be kept in the production room for at least 12 hours.

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 Emergency Situations and Environmental Safety 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 (Rospotrebnadzor)).

Warranty period of storage: for the polyethylene with a melt flow rate up to 12g/10 min Basic grades: 3 years from the date of manufacture. Compositions: for stabilization formulations: No. 08 – 3 years; Nos. 03, 06, 07, 14, 98 – 5 years; Nos. 01, 02, 04, 09, 10, 12, 93–97, 99, 100 – 7 years.

Chemical Analysis Laboratory Assistant of 5th Category (Power of Attorney No. 33/21 dated	Seal:			
01.01.2021)	PUBLIC JOINT STOCK COMPANY PUBLIC JOINT-STOCK COMPANY		Signature	O.V. Butvilovich
Stamp here	Quality Department Quality Division 7/2 UFAORGSINTEZ UFAORGSINTEZ	Certificate registration date:	22.11.2021	