

**POLYETHYLENE PE100  
GRADE PE 6949C (486H3)**

Product obtained by gas phase polymerization of ethylene in presence of complex metalorganic catalysts.  
Stabilization recipe: antacid, antioxidant, thermostabilizer, processing aid, dispersing aid, carbon black.  
Application: tubes and fittings for gas distribution network, and also pressure pipes and fittings for cold potable water supply systems.

Polyethylene type:  
Chemical name: Ethylene and 1-hexene copolymer  
Empirical formula:  $[(-CH_2)_3-CH(C_4H_9)]_{n+m}$   
Specification: TU 2211-150-05766801-2009

Property	Value	Test method
1 Density at 23 °C, kg/m <sup>3</sup>	Optional	Article 4.2 of this TU or ASTM D 1505
2 Melt flow rate at 190 °C and 5.0 kg, g/10 min., in the range	0.1-0.4	Article 4.3 of this TU or ASTM D 1238
3 MFR <sub>21.6 kg</sub> /MFR <sub>5.0 kg</sub> ratio, min.	18	Article 4.4 of this TU
4 MFR spread within a lot, %, max.	10	Article 4.5 of this TU
5 Tensile yield point, MPa, min.	21	Article 4.6 of this TU
6 Elongation at break, %, min.	500	Article 4.6 of this TU
7 Carbon content (carbon black), mass %	2.0-2.5	GOST 26311 or ISO 6964
8 Type of carbon distribution	A1, A2, A3, B	Article 4.7 of this TU
9 Mass fraction of volatiles, mg/kg, max.	350	GOST 26359
10 Thermal stability at 200 °C, min, not less than	20	Article 4.8 of this TU
11 Resistance to slow crack propagation at 80 °C and initial stress at the pipe wall, MPa, (on pipes <i>d</i> 110 mm with SDR 11 or <i>d</i> 160 mm with SDR 11), h, min.	4.6	Article 4.9 of this TU
12 Resistance to gas components at 80 °C and initial stress at the pipe wall 2 MPa (on pipes <i>d</i> 32 mm with SDR 11), h, min.	165	Article 4.10 of this TU
13 Resistance to rapid crack propagation at 0 °C at maximum pipeline operating pressure above 0.4 MPa - small-scale test method on pipes <i>d</i> 110 mm with SDR 11, critical pressure <i>p<sub>c</sub></i> , MPa, min.	20	Article 4.11 of this TU
14 Resistance at constant internal pressure at 20 °C on pipes <i>d</i> 32 mm with SDR at initial pressure, h, min. 12.4 MPa	$\frac{MOP}{2.4} - 0.072$	Article 4.12 of this TU

11.6 MPa 10.3 MPa 9.6 MPa	Optional	
15 Lower confidence limit of long-term strength $\sigma_{LCL}$ , MPa	$\geq 10$	GOST ISO 12162

Supply form:	Pellets
Packaging:	Product is packed into polyethylene bags (one bag net weight $25.00 \pm 0.25$ kg) and bundled on flat pallets with shrink film. Gross weight of a bundle is max 2 t. PE may be packed into soft containers (big bags) sized for 400-1000 kg. Upon agreement with a customer, PE pellets may be loaded unpacked straight into railcars for pelleted polymer materials and polymer truck-carriers, as well as may be delivered in bags by railcars
Transportation:	By all types of transport.
Storage:	Polyethylene shall be stored in enclosed dry space away from direct sun rays, on shelves or pallets at least 5 cm from the floor level, and at least 1 m from heaters, at temperature max 30 °C and relative humidity max 80%. Prior to processing, bags with polymer shall be kept for at least 12 hrs in production area.

Information contained herein is provided to the best of our knowledge and is considered true on the revision date. This specification does not release a customer from obligation to check the product as to suitability thereof for the intended application. A producer shall not be liable for any loss and damage that might occur due to use of this information.