

TASNEE 100 Black POLYETHYLENE

High Density Polyethylene

DESCRIPTION

TASNEE 100 Black is a High Density Polyethylene, black colored resin. The product is classified as PE 100. TASNEE 100 Black provides excellent environmental stress cracking resistance properties (ESCR) with very good long term hydrostatic strength and combines very high impact and stiffness properties.

TYPICAL PROPERTIES

PROPERTIES	VALUE	UNIT	METHOD
Physical			
Density	0.959	g/cm ³	ISO 1183
Melt Flow Rate (190°C / 5 kg)	0.23	g/10 min	ISO 1133
Melt Flow Rate (190°C / 21.6 kg)	6.4	g/10 min	ISO 1133
Staudinger Index Jg	380	ml/g	ISO 1628
Vicat Softening Temperature (VST/B/50 K/h (50N))	74	°C	ISO 306
Mechanical			
Tensile Modulus (23°C, v = 1 mm/min, Secant)	900	MPa	ISO 527-1, -2
Tensile Stress @ Yield (23°C, v = 50 mm/min)	23	MPa	ISO 527-1, -2
Tensile Strain @ Yield (23°C, v = 50 mm/min)	9	%	ISO 527-1, -2
Tensile Creep Modulus 1h [Test stress in MPa]	850 [2.0]	MPa	ISO 899-1
Tensile Creep Modulus 1000h [Test stress in MPa]	360 [2.0]	MPa	ISO 899-1
Maximum Elongation TD	>350	%	EN 638
MRS Classification	10	MPa	ISO/TR 9080
Flexural Stress at 3.5% deflection	21	MPa	ISO 178
FNCT (4.0 MPa, 2% Arkopal N 100, 80°C)	>1000	h	ISO 16770
Flexural Creep Modulus			
4 Point loading method, 1 min-value	1100	MPa	DIN 19537-2
4 Point loading method, 24 h-value	560	MPa	DIN 19537-2
4 Point loading method, 2000 h-value	330	MPa	DIN 19537-2
Charpy Notched Impact Strength (23°C)	26	kJ/m ²	ISO 179
Charpy Notched Impact Strength (-30°C)	13	kJ/m ²	ISO 179
Shore Hardness (Shore D (3 sec))	63		ISO 868
Oxidation Induction Time (OIT) (210°C)	30	min	EN 728
Carbon Black Content	2.25	%	ISO 6964
Odour Treshold	< 2		EN 1622 / EN 1240

NOTE

The above properties values are not to be construed as specifications.

RECOMMENDED TEMPERATURE

Melt temperature: 190–220 °C, Injection moulding temperatures: 200–280 °C.

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TYPICAL APPLICATIONS

Gas, water distribution, sewage and drainage pipes.

FOOD CONTACT

The material is manufactured to the highest standards but, special requirements apply to certain applications, such as food contact end-use. For specific information on regulatory compliance, please contact TASNEE below or our local representative in your area.

SAFETY

Workers should be protected from the possibility of skin or eye contact with molten polymer. As minimum precaution, safety glasses and heat resistance gloves are suggested to prevent mechanical or thermal injury to eyes and hands. Molten polymer exceeding processing condition requirements may degrade and release, fumes, vapors and unpleasant odor. In higher concentrations they may cause irritation of the mucus membranes. Fabrication areas should be ventilated to carry away fumes and vapors. Legislation on the control of emissions and pollution prevention must be observed. If the principles of sound manufacturing practice are adhered to and the place of work is well ventilated, no health hazards are involved in processing the material. The material may burn when supplied with excess heat and oxygen. It should be handled and stored away from contact with direct flames and/or ignition sources. In burning the material generates considerable heat and may release a dense black smoke. Fires should be extinguished by heavy foams or dry powder. For further information about safety in handling and processing please refer to the Material Safety Data Sheet (MSDS).

STORAGE

The material is packed in 25 kg bags or in bulk containers protecting it from contamination. Storage time of material longer than 6 months may have a negative influence on the quality of the final product. It is generally recommended to convert all materials latest within 6 months from delivery date. The material is subjected to degradation by ultra-violet radiation or by high storage temperatures. Therefore the material must be protected from direct sunlight, temperatures above 40°C and high atmospheric humidity during storage. Further unfavorable storage conditions are large fluctuations in ambient temperature and high atmospheric humidity. Due to the hygroscopic character of the carbon black pigments, black colored materials may pick up moisture even under appropriate storage conditions. These conditions may lead to moisture condensing inside the packaging. Under these circumstances, it is recommended to dry the material before use. After a storage period of more than 3 months, drying of such material is recommended as standard practice. TASNEE will not give any warranty to unfavorable storage conditions which may lead to quality deterioration such as color change, bad smell and inferior product performance.

DISCLAIMER

"The information and data contained in this publication is submitted without prejudice, and is based on our current knowledge, experience and on a limited number of tests". "In view of the many factors that may affect processing and application, these data do not relieve the receiver of this information from the responsibility of carrying out their own tests and experiments; neither do they imply any legally binding assurance of certain properties nor of suitability for a specific purpose of the products made with or on the basis of the information in this publication".