PRODUCT DATA SHEET

HIGH DENSITY POLYETHYLENE

HDPE-9410

HIGH DENSITY POLYETHYLENE FOR PIPES

DESCRIPTION

This specification covers the requirements for granulated high molecular weight high density polyethylene compound for Pipes like Micro Ducts. The material covered by this specification should conform to ASTM D-3350 type III, A. The suitable recommendation grade for Pipes production, stable against common chemicals found in the environment, and have good resistance to impact and pressure so as not to fail under various conditions. The material should contain a non-stanining antioxidant system.

The material should be stabilized against thermal and shear degradation and ensure long-term aging properties. The material furnished under this specification shall be free from dust, dirt, metallic particles, chaff streamers and all other foreign materials and uniforms in appearance as good commercial practice will permit. pellets furnished shall be approximately 3mm or less on all dimensions.

APPLICATIONS

HDPE 9410 is best designed for Pipes, Micro Ducts and similar pipes manufacturing processes. Customization is also possible based on customer special requirements.

Based on variation of Density it can be used for PE80 to PE100 even PE100+, suitable for different types of pipes, including pressure pipes, gas pressure pipe systems where flexibility and coilability is needed. Or for larger diameters, thick wall pipe, it can be even processed for the whole range of diameters.

In higher density grades, recommended for water pipes and natural gas, pressure sewage, relining, sea outfall and industrial applications, especially where they need to be implemented in challenging conditions.

Intended Use:
Suitable for use as pipes and micro duct production.

PROPERTIES

Item	Property	Test Method	Unit	Value
1	Melt Flow rate *	ASTM D1238	$g/10\ min$	0.2-0.6
2	Density (23°C)	ASTM D 792	g/cm^3	0.941-0.960
3	Tensile strength	ASTM D 638	MPa	min 20
4	Elongation at break	ASTM D 638	%	min 400
5	Retention of mechanical after aging 10 days at 100°C	ASTM D 638	%	min 90
6	Flexural Modulus	ASTM D790A	MPa	min 800
7	ESCR (F20, 100% Igepal soln. v/v)	ASTM D1693	Hours	≥ 192
8	Thermal stress cracking at 100°C	ASTM D2951	Hours	≥ 96
9	Hardness	ASTM D2240	Shore D	Min 60

*Melt flow rate test is based on standard with 5Kg weight

STORAGE

Packaging: Available in bulk, Octabins, and bags. HDPE 9410 has a shelf life of 24 months from the date of manufacture, provided it is stored in its original, unopened packaging under clean, dry conditions at temperatures between 10°C and 30°C (50°F to 85°F). Storage conditions can impact the material's quality and performance—extreme environments may degrade its properties. To maintain optimal quality, it is advisable to follow a First-In, First-Out (FIFO) stock rotation system.

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