Manufacturer website: https://oq.com/en/

Luban HD-P4010

(Legacy name: Luban DGDZ-2400)

High Density Polyethylene

Description

Luban HD-P4010 is high molecular weight high-density polyethylene with broad molecular weight distribution. The grade is intended for use in PE-80 pressure pipe applications where long-term hydrostatic strength and resistance to slow crack growth are desired. The grade has good processability, exceptional melt strength and ideally suited for both large and small diameter pipes. Carbon black (CB) should be added to the granular PE via LLDPE based masterbatch to obtain ca 2.25% CB in the pipe resin. The carbon black should have a particle size 10-25nm and be well dispersed in the final black pipe grade.

Main Characteristics:

- Hexene High Density Resin
- Exceptional Melt Strength
- PE-80 Pressure Pipe Grade

Application

PE-80 pipes for water, sewerage and gas distribution, corrugated pipes

Properties (Typical Values)

Property	Unit	Test method	Value
Melt Index (190°C/5 kg)	g/10 min	ASTM D1238	0.45
Melt Index (190°C/21.6 kg)	g/10 min	ASTM D1238	9.5
Density	g /cm³	ASTM D1505	0.940
Flexural modulus (2% Secant)	MPa	ASTM D790B[1]	690
Tensile stress at yield	MPa	ASTM D638[1]	18
Tensile stress at break	MPa	ASTM D638[1]	30
Tensile strain at break	%	ASTM D638[1]	600
PENT (slow crack growth; 80°C, 2.4 MPa)	hr	ASTM F1473	>3000
Designation		ISO 12162	PE-80
Minimum Required Strength (MRS)	MPa	ISO 9080	>8
Slow Crack Growth Resistance[2]- Notched Pipe	hr	ISO 13479	>500

[1]Molded and tested in accordance with ASTM D4976.

[2]Tested on 110mm SDR11 pipe.

Note: These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

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Storage and Handling

Luban HD-P4010 must be protected from direct sunlight and should be stored in a shaded and completely dry area. During handling and processing, the material should be kept in a well-ventilated area to prevent the accumulation of dust and fumes. Contact with strong oxidizers, excessive heat, sparks or open flame should be avoided as this could initiate the degradation process and consequently impact the quality of the material.

Safety

Luban HD-P4010 is not classified as dangerous preparation. For further information about safety in handling and processing please refer to the Safety Data Sheet.

Food Contact

Luban HD-P4010 meets the requirements of the U.S. Food and Drug Administration (FDA) as specified in 21 CFR 177.1520, covering safe use of polyolefin articles and components of articles intended for direct food contact. For additional information on approved conditions of use for food contact applications, please refer to the "Product Stewardship Declaration".

Recycling

The product is suitable for recycling using modern methods of shredding and cleaning. In-house production waste should be kept clean to facilitate direct recycling.

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Disclaimer:
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