

Centrene® HDF193B

High Density (HMW) Polyethylene

Qenos Pty Ltd

Technical Data

Product Description

Centrene® HDF193B is a black high molecular weight bimodal PE100 High Density Polyethylene. It is a high performance resin for use in pressure pipes where service life to 100 years is required. HDF193B offers a balance of excellent processing characteristics along with outstanding toughness, chemical resistance and slow crack growth resistance. HDF193B will also provide excellent resistance to the effects of ultra-violet light exposure in outdoor applications due to well dispersed carbon black.

Centrene® HDF193B is suitable for extrusion into a full range of pipes, where High Density, PE 100 type resins are required. In particular, a broad processing window and good sag resistance enables the extrusion of larger bore, thick wall pipe. HDF193B is suitable for use in the transport of a wide range of fluids for industrial, rural and mining applications, including potable water. Suitability for use in any application should be determined by appropriate performance testing.

General

Material Status	• Commercial: Active		
Literature ¹	• Technical Datasheet (English)		
Availability	• Asia Pacific		
Additive	• Carbon Black		
Features	• Bimodal Molecular Weight Distribution • Good Chemical Resistance • Good Processability	• Good UV Resistance • High Density • High ESCR (Stress Crack Resist.)	• High Molecular Weight • Ultra High Toughness
Uses	• Fittings • Industrial Applications	• Mining Applications • Outdoor Applications	• Piping
Agency Ratings	• AS/NZS 4130	• AS/NZS 4131	
Appearance	• Black		
Processing Method	• Pipe Extrusion		

Physical	Nominal Value Unit	Test Method
Density	0.956 g/cm ³	Internal Method
Melt Mass-Flow Rate (MFR)		ASTM D1238
190°C/21.6 kg	8.9 g/10 min	
190°C/5.0 kg	0.30 g/10 min	

Mechanical	Nominal Value Unit	Test Method
Tensile Modulus ³ (1.90 mm)	1300 MPa	ASTM D638
Tensile Strength ³		ASTM D638
Yield, 1.90 mm	26.0 MPa	
Break, 1.90 mm	33.0 MPa	
Tensile Elongation ³ (Break, 1.90 mm)	760 %	ASTM D638
Flexural Modulus - 1% Secant ⁴	1150 MPa	ASTM D790

Hardness	Nominal Value Unit	Test Method
Durometer Hardness (Shore D)	63	ASTM D2240

Notes

¹ These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

² Typical properties: these are not to be construed as specifications.

³ Type IV, 50 mm/min

⁴ 13 mm/min