Qenos PE GM5049B

High Density (HMW) Polyethylene

Qenos Pty Ltd

Message:

GM5049B is a black high molecular weight High Density Polyethylene. It is a high performance resin for use in pressure pipes where service life to 50 years is required. GM5049B offers a balance of excellent processing characteristics along with outstanding toughness, chemical resistance and environment stress crack resistance. GM5049B will also provide excellent resistance to the effects of Ultra-Violet light exposure in outdoor applications. GM5049B has been designed for extrusion into a full range of pipe and fitting sizes, where High Density, PE 100 Type resins are required. GM5049B 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.
GM5049B has been designed to meet the requirements for PE 100 Type compounds and has been accepted by Australasian Polyolefine Pipeline Systems Inc. as meeting AS/NZS 4131:1997 and is intended to be used in pipes conforming to AS/NZS 4130. The material does not comply with clause 8. of AS/NZS 4131:1997 in that the long-term hydrostatic strength at 50°C has not been determined. It does comply in full with draft standard AS/NZS4131 (draft 1999). GM5049B is suitable for food contact applications and conforms to the requirements of AS2070.

General Information	
Features	High ESCR (Stress Cracking Resistance) High molecular weight Good UV resistance Workability, good Good toughness Compliance of Food Exposure
Uses	Industrial application Piping system Accessories Liquid treatment
Agency Ratings	AS 2070-1999
Appearance	Black
Forms	Particle
Processing Method	Pipeline extrusion molding Extrusion

Physical	Nominal Value	Unit	Test Method
Density	0.956	g/cm³	ASTM D1505
Melt Mass-Flow Rate (MFR)			ASTM D1238
190°C/2.16 kg	0.045	g/10 min	ASTM D1238
190°C/21.6 kg	6.1	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (F50)	1000	hr	ASTM D1693
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (Shore D)	65		ASTM D2240

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			ASTM D638
--	855	MPa	ASTM D638
2% secant	840	MPa	ASTM D638
Tensile Strength			ASTM D638
Yield	24.0	MPa	ASTM D638
Fracture	31.0	MPa	ASTM D638
Tensile Elongation (Break)	700	%	ASTM D638
Flexural Modulus - 2% Secant	855	MPa	ASTM D790

Additional Information
Oxidative Induction Time, ISO/TR 10837, 210°C: >20 minPipe Properties:5.5 MPa Pressure, 80°C, AS 4131: >165 hr5.0 MPa Pressure, 80°C, AS 4131: >1000 hr12.4 MPa Pressure, 20°C, ISO 4427/4437: >100 hr

Recommended distributors for this material

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