Technical Data Sheet

Hyperzone HY4008

High Density Polyethylene

Product Description

Hyperzone HY4008 is a bimodal, high molecular weight, high density polyethylene resin with excellent processing characteristics. *Hyperzone* HY4008 is classified as PE100 and customers typically use HY4008 in applications requiring high resistance to pipe failure by rapid crack propagation and slow crack growth mechanisms.

Regulatory Status

For regulatory compliance information, see *Hyperzone* HY4008 Product Stewardship Bulletin (PSB) and Safety Data Sheet (SDS).

Status	Commercial: Active
Availability	Asia-Pacific
Application	Drainage Pipe; Drinking Water Pipe; Industrial; Soil & Waste Pipe
Market	Industrial, Building & Construction; Pipe
Processing Method	Pipe

Typical Properties	Nominal Value	Units	Test Method
Physical			
Melt Flow Rate			
(190 °C/5.0 kg)	0.25	g/10 min	ISO 1133-1
(190 °C/21.6 kg)	7.5	g/10 min	ISO 1133-1
Density, (23 °C)	0.9495	g/cm³	ISO 1183-1
Mechanical			
Flexural Modulus, (1% Secant)	1020	MPa	ISO 178
Tensile Modulus, (23 °C, 50 mm/min, Chord)	1030	MPa	ISO 527-1, -2
Tensile Stress at Break	31	MPa	ISO 527-1, -2
Tensile Stress at Yield	24	MPa	ISO 527-1, -2
Tensile Elongation at Break	620	%	ISO 527-1, -2
Thermal			
Oxidative-Induction Time, (210 °C)	>60	min	ASTM D3895
Conformance Testing			
Minimum Required Strength, (20 °C)	10	MPa	ISO 12162
Creep Rupture Strength, (20 °C, 12.4 MPa)	>500	hr	ISO 1167-1, -2
Resistance to Rapid Crack Propagation, Pc @ 0 °C	>12	bar	ISO 13477
Values were obtained on 12" SDR11 pipe made with HY4008 and an approved masterbatch.			
Resistance to Rapid Crack Propagation, Tc @ 5 bar (12")	-9	°C	ISO 13477
Values were obtained on 12" SDR11 pipe made with HY4008 and an approved masterbatch.			
Resistance to Rapid Crack Propagation, Tc @ 5 bar (4")	<-21	°C	ISO 13477
Values were obtained on 4" SDR11 pipe made with HY4008 and an approved masterbatch.			

Manufacturer website: https://www.lyondellbasell.com/en/

Notched Pipe Test, (80°C, 0.92 MPa)	1088	hr	ISO 13479

Values were obtained on 110mm SDR11 pipe made with HY4008 and an approved masterbatch.

Notes

Typical Property values were determined on natural HY4008 resin, unless otherwise noted. Conformance Test values were determined from HY4008 compounded with an approved masterbatch.

These are typical property values not to be construed as specification limits.

Processing Techniques

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

Company Information

For further information regarding the LyondellBasell company, please visit http://www.lyb.com/.

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