Technical Data Sheet

Hyperzone HY55430

High Density Polyethylene

Product Description

Hyperzone HY55430 is a high density polyethylene resin that exhibits excellent processability and environmental stress crack resistance. Typical applications include bottles for household chemicals, food products, and personal care products.

Application	Bottles For Consumer Goods
Market	Rigid Packaging
Processing Method	Extrusion Blow Molding
Attribute	Excellent ESCR (Environmental Stress Cracking Resistance); Excellent Processability

Typical Properties	Nominal Value	English Units	Nominal Value	SI Units	Test Method
Physical					
Melt Flow Rate					
(190 °C/2.16 kg)	0.34	g/10 min	0.34	g/10 min	ASTM D1238
(190 °C/2.16 kg)	0.34	g/10 min	0.34	g/10 min	ISO 1133-1
Density					
(23 °C)	0.954	g/cm³	0.954	g/cm³	ISO 1183-1
(23 °C)	0.954	g/cm³	0.954	g/cm³	ASTM D1505
Mechanical					
Flexural Modulus					
(1% Secant)	190000	psi	1310	MPa	ASTM D790
(1% Secant)			1120	MPa	ISO 178
Tensile Modulus			1150	MPa	ISO 527-1, -2
Tensile Strength at Yield	4000	psi	27.6	MPa	ASTM D638
Tensile Stress at Yield			26	MPa	ISO 527-1, -2
Tensile Elongation at Break	>1000	%	>1000	%	ASTM D638
Tensile Strain at Yield	9	%	9	%	ISO 527-1, -2
Environmental Stress Crack Resistance, F_{50} (100% Igepal®, Cond B)	200	hr	200	hr	ASTM D1693
FNCT, (6.0 MPa, 2% Arkopal N100, 50 °C)	12	hr	12	hr	ISO 16770
Impact					
Tensile Impact Strength	140	ft-lb/in²	294	kJ/m²	ASTM D1822
Hardness					
Shore Hardness					
(Shore D)	68		68		ISO 868
(Shore D)	68		68		ASTM D2240
Thermal					

Vicat Softening Temperature	259	°F	126	°C	ASTM D1525
(A50)			127	°C	ISO 306
(B50)			75	°C	ISO 306
Low Temperature Brittleness, F_{50}	<-105	°F	<-76	°C	ASTM D746
Deflection Temperature Under Load					
(66 psi, Unannealed)	151	°F	66	°C	ASTM D648
(0.45 MPa, Unannealed)			73	°C	ISO 75-1, -2
Additive					
Antistat	None		None		LYB Method

Product	Antistat(ppm)
HY55430	None
HY55430S	Present

Notes

Igepal® is a registered trademark of Rhodia.

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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