Shell Polymers

65N8
High-Density Polyethylene Resin

Technical Data Sheet

Product Description

Shell Polymers HDPE 65N8 is a homopolymer that provides excellent stiffness, low warpage, and easy processability. This grade is ideal for the production of cases, crates, totes, bins, and other articles requiring high stiffness. Certified to NSF/ANSI 51.

Highlights

- Excellent stiffness
- Low warpage
- High top load
- Gas phase technology

Resin Properties	Method	Nominal Value
Density	ASTM D792	0.965 g/cm^3
Melt Index (190 °C / 2.16 kg)	ASTM D1238	8.2 g/10 min

Mechanical Properties	Method	Nominal Value (English)	Nominal Value (SI)
Environmental Stress-Cracking Resistance (ESCR)[a]	ASTM D1693	3 hr	3 hr
Tensile[b] Strength at Yield	ASTM D638	4640 psi	32.0 MPa
Tensile[b] Strength at Break	ASTM D638	2000 psi	13.8 MPa
Tensile[b] Elongation at Yield	ASTM D638	7.3 %	7.3 %
Tensile[b] Elongation at Break	ASTM D638	225 %	225 %
Flexural Modulus 1% Secant	ASTM D790B	252,000 psi	1740 MPa
Flexural Modulus 2% Secant	ASTM D790B	213,000 psi	1470 MPa
Tensile Impact Strength	ASTM D1822	21.4 ft·lb/in^2	45.0 kJ/m^2
Notched Izod Impact (-30 °C)	ASTM D256	0.88 ft·lb/in	47.0 J/m

Thermal Properties	Method	Nominal Value (English)	Nominal Value (SI)
Deflection Temperature Under Load at 66 psi (0.455 MPa) Unannealed	ASTM D648	187 °F	86 °C
Peak Melting Temperature		277 °F	136 °C
Peak Crystallization Temperature		244 °F	118 °C

Notes

Typical properties only. Not to be construed as specifications. Users should confirm results by performing their own tests.

Plaques molded in accordance with ASTM D4703C

(a) ESCR tested using Condition B, 100% Igepal

(b) Tensile properties tested on Type IV specimens

Regulatory Statement:

- Complies with U.S. FDA 21 CFR 177.1520 (c) 2.1 or 2.2
- Consult the Regulatory Data Sheet for more details. It is available upon request. Please contact your Account Manager.

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