

INEOS HDPE G50-100

High Density Polyethylene Copolymer

INEOS Olefins & Polymers USA

Message:

G50-100 is a high molecular weight, high density polyethylene copolymer developed for sheet extrusion, thermoforming, and large part blow molding where the finished product demands outstanding physical performance. This material meets the Food and Drug Administration requirements of 21 CFR 177.1520.

General Information			
UL YellowCard	E31830-100062232		
Features	Copolymer		
	Food Contact Acceptable		
	High Density		
	High Molecular Weight		
Uses	Blow Molding Applications		
	Sheet		
	Thermoforming Applications		
Agency Ratings	EC 1907/2006 (REACH)		
	FDA 21 CFR 177.1520		
RoHS Compliance	Contact Manufacturer		
Forms	Pellets		
Processing Method	Blow Molding		
	Sheet Extrusion		
	Thermoforming		
Physical	Nominal Value	Unit	Test Method
Density	0.950	g/cm ³	ASTM D4883
Melt Mass-Flow Rate (MFR) (190°C/21.6 kg)	10	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (100% Igepal, F50)	264	hr	ASTM D1693B
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	67		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ¹			ASTM D638
Yield	25.9	MPa	
Break	35.9	MPa	
Tensile Elongation ²			ASTM D638

Yield	10	%	
Break	920	%	
Flexural Modulus			ASTM D790A
2% Secant	947	MPa	
Tangent	1220	MPa	
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	410	J/m	ASTM D256
Notched Izod Impact (Area)	40.5	kJ/m ²	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (0.45 MPa, Unannealed)	71.7	°C	ASTM D648
Brittleness Temperature	< -75.0	°C	ASTM D746
Vicat Softening Temperature	126	°C	ASTM D1525
Oxidation Induction Time (210°C)	> 21	min	ASTM D3895
NOTE			
1.	51 mm/min		
2.	51 mm/min		

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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

