

INEOS HDPE K54-05

High Density Polyethylene Copolymer

INEOS Olefins & Polymers USA

Message:

K54-05 is a high molecular weight, high density polyethylene copolymer intended for blow molding large parts such as drums. It combines excellent processability and a good balance of stiffness, environmental stress crack resistance (ESCR) and impact properties. This resin meets the Food and Drug Administration requirements of 21CFR 177.1520 for contact with food.

General Information			
Features	Copolymer		
	Food Contact Acceptable		
	Good Processability		
	High Density		
	High Molecular Weight		
Uses	Drums		
Agency Ratings	EC 1907/2006 (REACH)		
	FDA 21 CFR 177.1520		
RoHS Compliance	Contact Manufacturer		
Forms	Pellets		
Processing Method	Blow Molding		
Physical	Nominal Value	Unit	Test Method
Density	0.954	g/cm ³	ASTM D4883
Melt Mass-Flow Rate (MFR) (190°C/21.6 kg)	5.0	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance			
10% Igepal, F50	140	hr	ASTM D1693B
100% Igepal, F50	1800	hr	ASTM D1693A
100% Igepal, F50	> 1000	hr	ASTM D1693B
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	64		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ¹			ASTM D638
Yield	28.6	MPa	
Break	41.4	MPa	
Tensile Elongation ²			ASTM D638
Yield	9.0	%	
Break	900	%	
Flexural Modulus			ASTM D790A
2% Secant	1050	MPa	

Tangent	1410	MPa	
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	700	J/m	ASTM D256
Notched Izod Impact (Area)	69.3	kJ/m ²	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	70.0	°C	
1.8 MPa, Unannealed	47.2	°C	
Brittleness Temperature	< -75.0	°C	ASTM D746
Vicat Softening Temperature	128	°C	ASTM D1525
NOTE			
1.	51 mm/min		
2.	51 mm/min		

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