K54-05 Polyethylene Copolymer

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.

Typical Properties[1]

	Values		ASTM
	English Units	SI Units	Method
Resin			
Density	–	0.954 g/cc	**D4883**
Melt Index 190°C/ 21.6 kg	–	5.0 g/10 min	**D1238**
Compression Molded Samples			
Tensile Strength (2 in/min)			**D638**
@ Yield	4,150 psi	28.6 MPa	
@ Break	6,000 psi	41.4 MPa	
Elongation (2 in/min)			**D638**
@ Yield	9 %	9 %	
@ Break	900 %	900 %	
Flexural Modulus			**D790A**
Tangent Method	205,000 psi	1,410 MPa	
2% Secant Method	152,000 psi	1,050 MPa	
Notched Izod Impact Strength	13.2 ft-lbf/in	69.3 kJ/m^2	**D256**
Hardness (Shore D)	64	64	**D2240**
Vicat Softening Point	262 F	128 C	**D1525**
Brittleness Temperature	<-103 F	<-75 C	**D746**
Heat Deflection Temperature			**D648**
@ 66 psi (455 kPa)	158 F	70 C	
@ 264 psi (1,820 kPa)	117 F	47 C	
Environmental Stress Crack Resistance			**D1693**
Condition A, 100% Igepal F50 (hrs.)	1,800	1,800	
Condition B, 10% Igepal F50 (hrs.)	140	140	
Condition B, 100% Igepal F50 (hrs.)	>1,000	>1,000	

[1] **Typical properties will vary and are not to be used for specification purposes.**

INEOS
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