

J50-1000-178 Polyethylene Copolymer

J50-1000-178 is a narrow molecular weight high density polyethylene copolymer intended for the production of closures for beverages by either compression or injection molding. Because of its high purity and excellent organoleptic properties, this grade is certified as low taste and is intended for use in direct contact with beverages. Typical applications include caps and closures for water. This material meets the Food and Drug Administration requirements of 21 CFR 177.1520.

Typical Properties¹

	Values		ASTM Method
	English Units	SI Units	
Resin			
Density	—	0.951 g/cc	D4883
Melt Index 190 C/ 2.16 kg	—	11 g/10 min	D1238
Compression Molded Sample			
Tensile Strength (2 in/min)			D638
@ Yield	4,000 psi	28.0 MPa	
@ Break	1,650 psi	11.0 MPa	
Elongation (2 in/min)			D638
@ Yield	9.5 %	9.5 %	
@ Break	> 800 %	> 800 %	
Flexural Modulus			D790A
Tangent Method	173,000 psi	1,193 MPa	
Notched Izod Impact Strength	0.7 ft-lbf/in	3.7 kJ/m ²	D256
Hardness			D2240
Shore D	66	66	
Vicat Softening Point	253 F	123 C	D1525
Brittleness Temperature	<-94 F	<-70 C	D746
Deflection Temperature			D648
@ 66 psi (455 kPa)	163 F	73 C	
Environmental Stress Crack Resistance			D1693
Condition B, 100% Igepal, F50 (hrs.)	4	4	

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