

Acetal Copolymer KEPITAL®

KOREA ENGINEERING PLASTICS CO.,LTD.

TX-21

A medium viscosity grade for general injection molding. It is suitable for use requiring reduced wear noise, and a good friction & wear resistance without sacrificing mechanical properties.

Property	Test Method	Units	Value
Physical			
Specific Gravity	ASTM D792	—	1.39
Water Absorption 23℃, 60%RH	ASTM D570	%	0.22
Thermal			
Melt Index 190℃, 2.16 kg	ASTM D1238	g/10min	14
Melting Point 10℃/min	ASTM D3418	℃	165
Heat Deflection Temperature 4.6kg _f /cm ² (0.5MPa)	ASTM D648	℃	158
18.6kg _f /cm ² (1.8MPa)			110
Coeff. of Linear Thermal Expansion 20~80℃	ASTM D696	x 10 ⁻⁵ cm/cm/℃	13
Flammability t 0.8mm	UL94	—	HB
Mechanical			
Tensile Strength 23℃	ASTM D638	kg _f /cm ² (MPa)	550 (54)
Tensile Elongation 23℃	ASTM D638	%	65
Flexural Strength 23℃	ASTM D790	kg _f /cm ² (MPa)	800 (78)
Flexural Modulus 23℃	ASTM D790	x 10 ⁴ kg _f /cm ² (MPa)	2.45 (2,400)
Shear Strength t 2mm	ASTM D732	kg _f /cm ² (MPa)	
Notched Izod Impact Strength t 3.2mm	ASTM D256	kg _f · cm/cm (J/m)	7.5 (74)
Rockwell Hardness M scale	ASTM D785	—	M80
Electrical			
Dielectric Constant 10 ⁶ Hz	ASTM D150	—	
Dielectric Dissipation Factor 10 ⁶ Hz	ASTM D150	—	
Surface Resistivity	ASTM D257	Ω	1 x 10 ¹⁶
Volume Resistivity	ASTM D257	Ω · cm	1 x 10 ¹⁴
Dielectric Strength	ASTM D149	kV/mm	
Molding Shrinkage (//Direction) t 3mm, Φ 100mm		%	2.0
Friction & Wear			
Specific Wear Resin vs. Resin		mm ³ / kg _f · km	0.10
Resin vs. Metal		mm ³ / kg _f · km	0.03
Dynamic Friction Coefficient Resin vs. Resin		—	0.18
(μ) Resin vs. Metal		—	0.23



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Property	Test Method	Units	Value
Physical			
Specific Gravity	ASTM D792	—	1.39
Water Absorption 23℃ (73°F), 60%RH	ASTM D570	%	0.22
Thermal			
Melt Index 190℃, 2.16 kg	ASTM D1238	g/10min	14
Melting Point 10℃/min	ASTM D3418	℃ (°F)	165 (329)
Heat Deflection Temperature 4.6kg _f /cm ² (64psi) 18.6kg _f /cm ² (264psi) ¹	ASTM D648	℃ (°F)	158 (316) 110 (230)
Coeff. of Linear Thermal Expansion 20~80℃	ASTM D696	x 10 ⁻⁵ cm/cm/℃	13
Flammability t 0.8mm(t 0.03in)	UL94	—	HB
Mechanical			
Tensile Strength 23℃ (73°F)	ASTM D638	kg _f /cm ² (psi)	550 (7,800)
Tensile Elongation 23℃ (73°F)	ASTM D638	%	65
Flexural Strength 23℃ (73°F)	ASTM D790	kg _f /cm ² (x 10 ³ psi)	800 (11.4)
Flexural Modulus 23℃ (73°F)	ASTM D790	x 10 ⁴ kg _f /cm ² (x 10 ⁴ psi)	2.45 (34.8)
Shear Strength t 2mm (t 0.08in)	ASTM D732	kg _f /cm ² (psi)	—
Notched Izod Impact Strength t 3.2mm (t 0.126in)	ASTM D256	kg _f · cm/cm(ft · lb/in)	7.5 (1.4)
Rockwell Hardness M scale	ASTM D785	—	M80
Electrical			
Dielectric Strength 10 ⁶ Hz	ASTM D150	—	—
Dielectric Dissipation Factor 10 ⁶ Hz	ASTM D150	—	—
Surface Resistivity	ASTM D257	Ω	1 x 10 ¹⁶
Volume Resistivity	ASTM D257	Ω · cm	1 x 10 ¹⁴
Dielectric Strength	ASTM D149	kV/mm	—
Molding Shrinkage (//Direction) t 3mm, Φ 100mm		%	2.0
Friction & Wear			
Specific Wear Resin vs. Resin		mm ³ / kg _f · km	0.10
Resin vs. Metal		mm ³ / kg _f · km	0.03
Dynamic Friction Coefficient (μ) Resin vs. Resin		—	0.18
Resin vs. Metal		—	0.23

