

KEYFLEX BT 1172D

Extrusion Molding, TPC-ET

Description

General Purpose, High Modulus

Application

Cable & Wire Jackets, Hose & Tubing, Sheet, etc.

Properties	Test Condition	Test Method	Unit	Typical Value
Physical				
Specific Gravity		ASTM D792	-	1.25
Molding Shrinkage (Flow), 3.2mm		ASTM D955	%	1.5 ~ 1.9
Melt Flow Rate	240 °C/2.16kg	ASTM D1238	g/10min	15
Water Absorption	23 °C, 24hrs	ASTM D570	%	0.3
Mechanical				
Tensile Strength, 2mm		ASTM D638		
@ Yield	50mm/min		kg/cm ²	250
@ Break	50mm/min		kg/cm ²	500
Tensile Elongation, 2mm		ASTM D638		
@ Yield	50mm/min		%	
@ Break	50mm/min		%	600
Flexural Strength, 6.4mm	15mm/min	ASTM D790	kg/cm ²	
Flexural Modulus, 6.4mm	15mm/min	ASTM D790	kg/cm ²	4,500
Tear Strength @ Break	50mm/min	ASTM D624	kg/cm	165
IZOD Impact Strength, 6.4mm (Notched)		ASTM D256		
	23 °C		kg·cm/cm	15
	-40 °C		kg·cm/cm	4.5
Shore Hardness	Shore D	ASTM D2240	-	66
Shore Hardness	Shore A	ASTM D2240	-	
Thermal				
Melt Temperature @ Peak		ASTM D3418	°C	217
Heat Deflection Temperature, 6.4mm (Unannealed)	4.6kg	ASTM D648	°C	130
Flammability		UL94		
1.5mm			class	HB
3.0mm			class	HB
Electrical				
Comparative Tracking Index(CTI)	Solution A	IEC 60112	Volts	600
Surface Resistivity		IEC 60093	Ohm	
Volume Resistivity	23 °C	ASTM D257	Ohm·m	>E11
Dielectric Strength, 1mm	23 °C	ASTM D149	kV/mm	26
Dielectric Constant (10 ⁶ Hz)	23 °C	ASTM D150	sec	

Note) Typical values are only for material selection purpose, and variation within normal tolerances are for various colors.

Values given should not be interpreted as specification and not be used for part or tool design.

All properties, except melt flow rate are measured on injection moulded specimens and after 48 hours storage at 23 °C, 50% relative humidity.

Updated : 25-Jun-14

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Processing Guide (Injection Molding)

Processing Parameters	Unit	Value	
Drying Temperature	°C	80 ~ 90	
Drying Time	hrs	3 ~ 4	
Maximum Moisture Content	%	0.01	
Melt Temperature	°C	220 ~ 240	
Cylinder Temperature	Rear	°C	220 ~ 240
	Middle	°C	230 ~ 250
	Front	°C	235 ~ 255
Nozzle Temperature	°C	235 ~ 255	
Mold Temperature	°C	40 ~ 60	
Back Pressure	kg/cm ²		
Screw Speed	rpm		

Note) Back Pressure & Screw Speed are only mentioned as general guidelines.

These may not apply or need adjustment in specific situations such as low shot sizes, thin wall molding and gas-assist molding.

Processing Guide (Extrusion Molding)

Processing Parameters	Unit	Value	
Drying Temperature	°C	80 ~ 90	
Drying Time	hrs	3 ~ 4	
Maximum Moisture Content	%	0.01	
Melt Temperature	°C	220 ~ 240	
Barrel Temperature	Zone 1	°C	220 ~ 240
	Zone 2	°C	230 ~ 250
	Zone 3	°C	230 ~ 250
	Zone 4	°C	230 ~ 250
Adapter Temperature	°C	230 ~ 250	
Die Temperature	°C	220 ~ 240	

Note) Recommend initial lower temperatures settings to avoid material degradation/hang-up in die & purge material from extruder prior to shutdown.

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