

VALOXTM RESIN K4560

REGION AMERICAS

DESCRIPTION

30% glass reinforced PBT. Impact modified, high flow, hydrolytically stable.

TYPICAL PROPERTY VALUES

Revision 20181115

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	112	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	112	MPa	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	3	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	3	%	ASTM D 638
Tensile Modulus, 5 mm/min	8840	MPa	ASTM D 638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	173	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	7200	MPa	ASTM D 790
IMPACT			
Izod Impact, unnotched, 23°C	817	J/m	ASTM D 4812
Izod Impact, notched, 23°C	96	J/m	ASTM D 256
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	220	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	200	°C	ASTM D 648
PHYSICAL			
Specific Gravity	1.5	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.6 – 0.8	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm	1 – 1.2	%	SABIC method
Melt Volume Rate, MVR at 250°C/5.0 kg	41	cm ³ /10 min	ISO 1133
AFTER 40 CYCLES, SIMILAR TO USCAR-2, CLASS III			
Tensile Stress, brk, Type I, 50 mm/min	96	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	102	MPa	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	2.2	%	ASTM D 638
Flexural Modulus, 1.3 mm/min, 50 mm span	7400	MPa	ASTM D 790
Flexural Strain, 1.3 mm/min, 50 mm span	4.5	%	ASTM D 790
Instrumented Impact, Total Energy, 23°C	8	J	ASTM D 3763
PROPERTIES AFTER 1008 HOURS AT 125°C			
Tensile Stress, brk, Type I, 5 mm/min	115	MPa	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	4	%	ASTM D 638
Flexural Modulus, 1.3 mm/min, 50 mm span	7100	MPa	ASTM D 790
Flexural Strain, 1.3 mm/min, 50 mm span	4.2	%	ASTM D 790
Instrumented Impact, Total Energy, 23°C	7	J	ASTM D 3763
AFTER 40 CYCLES, SIMILAR TO USCAR-2, CLASS IV			
Tensile Stress, brk, Type I, 5 mm/min	107	MPa	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	2.5	%	ASTM D 638

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Flexural Modulus, 1.3 mm/min, 50 mm span	8000	MPa	ASTM D 790
Flexural Strain, 1.3 mm/min, 50 mm span	4	%	ASTM D 790
Instrumented Impact, Total Energy, 23°C	6	J	ASTM D 3763
PROPERTIES AFTER 1008 HOURS AT 155°C			
Tensile Stress, brk, Type I, 5 mm/min	110	MPa	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	4	%	ASTM D 638
Flexural Modulus, 1.3 mm/min, 50 mm span	7500	MPa	ASTM D 790
Flexural Strain, 1.3 mm/min, 50 mm span	4.2	%	ASTM D 790
INJECTION MOLDING			
Drying Temperature	60 – 75	°C	
Drying Time	4 – 6	hrs	
Drying Time (Cumulative)	8	hrs	
Maximum Moisture Content	0.05	%	
Melt Temperature	250 – 265	°C	
Nozzle Temperature	245 – 260	°C	
Front - Zone 3 Temperature	250 – 265	°C	
Middle - Zone 2 Temperature	245 – 260	°C	
Rear - Zone 1 Temperature	240 – 255	°C	
Mold Temperature	65 – 90	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	50 – 80	rpm	
Shot to Cylinder Size	40 – 80	%	
Vent Depth	0.025 – 0.038	mm	

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