

VALOX™ RESIN K4530

REGION EUROPE

DESCRIPTION

15% glass reinforced PBT, Hydrolytically stable, High flow, Automotive connectors.

TYPICAL PROPERTY VALUES

Revision 20190709

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	103	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	103	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	4	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	4	%	ASTM D638
Tensile Modulus, 5 mm/min	3550	MPa	ASTM D638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	150	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	4640	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	98	MPa	ISO 527
Tensile Stress, break, 5 mm/min	98	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	3.1	%	ISO 527
Tensile Strain, break, 5 mm/min	3.1	%	ISO 527
Tensile Modulus, 1 mm/min	5250	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	150	MPa	ISO 178
Flexural Stress, break, 2 mm/min	150	MPa	ISO 178
Flexural Modulus, 2 mm/min	4750	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	400	J/m	ASTM D4812
Izod Impact, notched, 23°C	58	J/m	ASTM D256
Izod Impact, unnotched 80°10°4 +23°C	30	kJ/m²	ISO 180/1U
Izod Impact, notched 80°10°4 +23°C	7	kJ/m²	ISO 180/1A
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	218	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	193	°C	ASTM D648
Vicat Softening Temp, Rate B/120	205	°C	ISO 306
PHYSICAL			
Specific Gravity	1.41	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm	0.7 – 0.9	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm	1 – 1.2	%	SABIC method
Melt Volume Rate, MVR at 250°C/2.16 kg	17	cm³/10 min	ISO 1133
FLAME CHARACTERISTICS			
UL Yellow Card Link	E45329-101938098	-	-
AFTER 40 CYCLES, SIMILAR TO USCAR-2, CLASS III			
Tensile Stress, brk, Type I, 5 mm/min	82	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.5	%	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	4520	MPa	ASTM D790

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CHEMISTRY THAT MATTERS™



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Flexural Strain, 1.3 mm/min, 50 mm span	9.7	%	ASTM D790
Instrumented Impact, Total Energy, 23°C	6	J	ASTM D3763
PROPERTIES AFTER 1008 HOURS AT 125°C			
Tensile Stress, brk, Type I, 5 mm/min	98	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	4	%	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	4820	MPa	ASTM D790
Flexural Strain, 1.3 mm/min, 50 mm span	7	%	ASTM D790
Instrumented Impact, Total Energy, 23°C	5	J	ASTM D3763
AFTER 40 CYCLES, SIMILAR TO USCAR-2, CLASS IV			
Tensile Stress, brk, Type I, 5 mm/min	89	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.3	%	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	5100	MPa	ASTM D790
Flexural Strain, 1.3 mm/min, 50 mm span	6	%	ASTM D790
Instrumented Impact, Total Energy, 23°C	4	J	ASTM D3763
PROPERTIES AFTER 1008 HOURS AT 155°C			
Tensile Stress, brk, Type I, 5 mm/min	4812	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	97.2	%	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	0	MPa	ASTM D790
Flexural Strain, 1.3 mm/min, 50 mm span	3.8	%	ASTM D790
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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