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

© 2024 Copyright by SABIC. All rights reserved

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	

DISCLAIMER

Any sale by SABIC, its subsidiaries and affiliates (each a "seller"), is made exclusively under seller's standard conditions of sale (available upon request) unless agreed otherwise in writing and signed on behalf of the seller. While the information contained herein is given in good faith, SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND NONINFRINGEMENT OF INTELLECTUAL PROPERTY, NOR ASSUMES ANY LIABILITY, DIRECT OR INDIRECT, WITH RESPECT TO THE PERFORMANCE, SUITABILITY OR FITNESS FOR INTENDED USE OR PURPOSE OF THESE PRODUCTS IN ANY APPLICATION. Each customer must determine the suitability of seller materials for the customer's particular use through appropriate testing and analysis. No statement by seller concerning a possible use of any product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right.

© 2024 Copyright by SABIC. All rights reserved