VALOX™ RESIN 8032U

REGION EUROPE

DESCRIPTION

VALOX 8032U is a 30% glass fibre reinforced, UV stabilized PBT+PET blend with excellent surface finish. Applications: appliance housings, door handles, mirror brackets.

TYPICAL PROPERTY VALUES

Revision 20190925

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	115	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	115	MPa	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	2	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	2	%	ASTM D 638
Tensile Modulus, 5 mm/min	9950	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	165	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	8450	MPa	ASTM D 790
Taber Abrasion, CS-17, 1 kg	30	mg/1000cy	SABIC method
Tensile Stress, yield, 5 mm/min	145	MPa	ISO 527
Tensile Stress, break, 5 mm/min	145	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	2.4	%	ISO 527
Tensile Strain, break, 5 mm/min	2.5	%	ISO 527
Tensile Modulus, 1 mm/min	9500	MPa	ISO 527
Flexural Stress, break, 2 mm/min	210	MPa	ISO 178
Flexural Modulus, 2 mm/min	8500	MPa	ISO 178
Ball Indentation Hardness, H358/30	110	MPa	ISO 2039-1
Hardness, Rockwell R	119	-	ISO 2039-2
IMPACT			
Izod Impact, unnotched, 23°C	480	J/m	ASTM D 4812
Izod Impact, unnotched, -30°C	470	J/m	ASTM D 4812
Izod Impact, notched, 23°C	57	J/m	ASTM D 256
Izod Impact, notched, -30°C	48	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	8	J	ASTM D 3763
Izod Impact, unnotched 80*10*4 +23°C	45	kJ/m²	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	40	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	9	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 0°C	8	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	8	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	9	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	9	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	45	kJ/m²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	40	kJ/m²	ISO 179/1eU
THERMAL			
Vicat Softening Temp, Rate A/50	220	°C	ASTM D 1525

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Vicat Softening Temp, Rate B/50	202	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	208	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	190	°C	ASTM D 648
CTE, -40°C to 40°C, flow	2.5E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	7.5E-05	1/°C	ASTM E 831
CTE, 23°C to 60°C, flow	2.2E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	8.1E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate A/50	220	°C	ISO 306
Vicat Softening Temp, Rate B/50	202	°C	ISO 306
Vicat Softening Temp, Rate B/120	204	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	217	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	195	°C	ISO 75/Ae
PHYSICAL			
Specific Gravity	1.58	-	ASTM D 792
Mold Shrinkage on Tensile Bar, flow	0.4 – 0.8	%	SABIC method
Mold Shrinkage, flow, 3.2 mm	0.4 – 0.8	%	SABIC method
Mold Shrinkage on Tensile Bar, xflow	0.6 – 1	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm	0.6 – 1	%	SABIC method
Melt Flow Rate, 265°C/2.16kgf	15	g/10 min	ASTM D 1238
Density	1.53	g/cm³	ISO 1183
Water Absorption, (23°C/sat)	0.16	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.05	%	ISO 62
Melt Volume Rate, MVR at 265°C/2.16 kg	15	cm³/10 min	ISO 1133
ELECTRICAL			
Comparative Tracking Index (UL) {PLC}	2	PLC Code	UL 746A
Volume Resistivity	>1.E+15	Ohm-cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ohm	IEC 60093
Dielectric Strength, in oil, 0.8 mm	27	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 1.6 mm	23	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 3.2 mm	15	kV/mm	IEC 60243-1
Relative Permittivity, 100 Hz	3.6	-	IEC 60250
Relative Permittivity, 1 MHz	3.2	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.0008	-	IEC 60250
Dissipation Factor, 1 MHz	0.013	-	IEC 60250
Comparative Tracking Index	300	V	IEC 60112
Relative Permittivity, 50/60 Hz	3.3	-	IEC 60250
FLAME CHARACTERISTICS			
UL Compliant, 94HB Flame Class Rating	1.6	mm	UL 94 by SABIC-IP
INJECTION MOLDING			
Drying Temperature	110 – 120	°C	
Drying Time	4 – 6	hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	260 – 285	°C	
Nozzle Temperature	265 – 275	°C	

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Front - Zone 3 Temperature	260 – 280	°C	
Middle - Zone 2 Temperature	255 – 280	°C	
Rear - Zone 1 Temperature	240 – 260	°C	
Hopper Temperature	40 – 60	°C	
Mold Temperature	60 – 110	°C	

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