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 20240228

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
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	2.5	%	ISO 527
Tensile Strain, break, 5 mm/min	2.5	%	ISO 527
Tensile Modulus, 1 mm/min	10500	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	210	MPa	ISO 178
Flexural Stress, break, 2 mm/min	210	MPa	ISO 178
Flexural Strain, break, 2 mm/min	3	%	ISO 178
Flexural Modulus, 2 mm/min	9500	MPa	ISO 178
Tensile Stress, yld, Type I, 5 mm/min	140	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	140	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	2.5	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.5	%	ASTM D638
Tensile Modulus, 5 mm/min	10500	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	205	MPa	ASTM D790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	200	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	9500	MPa	ASTM D790
Taber Abrasion, CS-17, 1 kg	30	mg/1000cy	SABIC method
Ball Indentation Hardness, H358/30	234	MPa	ISO 2039-1
Hardness, Rockwell R	120	-	ISO 2039-2
IMPACT			
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
Izod Impact, unnotched 80*10*4 +23°C	50	kJ/m²	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	45	kJ/m²	ISO 180/1U
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
Charpy Impact, notched, 23°C	9	kJ/m²	ISO 179/2C
Charpy Impact, notched, -30°C	9	kJ/m²	ISO 179/2C
Charpy Impact, unnotched, 23°C	58	kJ/m²	ISO 179/2C
Charpy Impact, unnotched, -30°C	50	kJ/m²	ISO 179/2C

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Izod Impact, notched, 23°C	70	J/m	ASTM D256
Izod Impact, notched, -30°C	65	J/m	ASTM D256
Izod Impact, unnotched, 23°C	750	J/m	ASTM D4812
Izod Impact, unnotched, -30°C	700	J/m	ASTM D4812
Instrumented Dart Impact Total Energy, 23°C	8	J	ASTM D3763
THERMAL			
Vicat Softening Temp, Rate A/50	220	°C	ISO 306
Vicat Softening Temp, Rate B/50	210	°C	ISO 306
Vicat Softening Temp, Rate B/120	210	°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	220	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	200	°C	ISO 75/Af
CTE, 23°C to 60°C, flow	2.2E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	10.0E-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	ASTM D1525
Vicat Softening Temp, Rate B/50	210	°C	ASTM D1525
HDT, 0.45 MPa, 3.2 mm, unannealed	220	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	200	°C	ASTM D648
CTE, -40°C to 40°C, flow	2.5E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	7.5E-05	1/°C	ASTM E831
PHYSICAL			
Density	1.57	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.07	%	ISO 62
Water Absorption, (23°C/saturated)	0.22	%	ISO 62-1
Mold Shrinkage, flow, 24 hrs	0.1 – 0.5	%	ISO 294
Mold Shrinkage, xflow, 24 hrs	0.6 – 1.0	%	ISO 294
Melt Volume Rate, MVR at 250°C/5.0 kg	20	cm³/10 min	ISO 1133
Melt Volume Rate, MVR at 265°C/2.16 kg	15	cm³/10 min	ISO 1133
Melt Volume Rate, MVR at 265°C/5.0 kg	35	cm³/10 min	ISO 1133
Melt Viscosity, 260°C, 1500 sec-1	195	Pa-s	ISO 11443
Specific Gravity	1.57	-	ASTM D792
Filler Content	30	%	ASTM D229
Moisture Absorption, (23°C/50% RH/24 hrs)	0.05	%	ASTM D570
Water Absorption, (23°C/24hrs)	0.07	%	ASTM D570
Mold Shrinkage, flow, 24 hrs	0.1 – 0.5	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs	0.6 – 1.0	%	ASTM D955
Melt Flow Rate, 265°C/2.16kgf	21	g/10 min	ASTM D1238
Melt Flow Rate, 265°C/5.0 kgf	45	g/10 min	ASTM D1238
ELECTRICAL			
Comparative Tracking Index (UL) {PLC}	2	PLC Code	UL 746A
Volume Resistivity	>1.E+15	Ω.cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ω	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

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
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	
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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