

VALOX™ RESIN SHF4340

REGION EUROPE

DESCRIPTION

20% GF Super High Flow PBT

TYPICAL PROPERTY VALUES

Revision 20181128

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	105	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	105	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	2	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2	%	ASTM D638
Tensile Modulus, 5 mm/min	6800	MPa	ASTM D638
Tensile Stress, yield, 5 mm/min	110	MPa	ISO 527
Tensile Stress, break, 5 mm/min	110	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	3	%	ISO 527
Tensile Strain, break, 5 mm/min	3	%	ISO 527
Tensile Modulus, 1 mm/min	6700	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	160	MPa	ISO 178
Flexural Stress, break, 2 mm/min	160	MPa	ISO 178
Flexural Strain, break, 2 mm/min	3	%	ISO 178
Flexural Modulus, 2 mm/min	5600	MPa	ISO 178
Ball Indentation Hardness, H358/30	185	MPa	ISO 2039-1
Hardness, Rockwell R	118	-	ISO 2039-2
IMPACT			
Charpy Impact, unnotched, 23°C	35	kJ/m²	ISO 179/2C
Charpy Impact, unnotched, -30°C	25	kJ/m²	ISO 179/2C
Izod Impact, unnotched, 23°C	350	J/m	ASTM D4812
Izod Impact, unnotched, -30°C	330	J/m	ASTM D4812
Izod Impact, notched, 23°C	80	J/m	ASTM D256
Izod Impact, notched, 0°C	80	J/m	ASTM D256
Izod Impact, notched, -30°C	80	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	8	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	7	kJ/m²	ISO 179/1eA
Charpy Impact, notched, 23°C	9	kJ/m²	ISO 179/2C
Charpy Impact, notched, -30°C	9	kJ/m²	ISO 179/2C
THERMAL			
Vicat Softening Temp, Rate A/50	220	°C	ASTM D1525
Vicat Softening Temp, Rate B/50	205	°C	ASTM D1525
HDT, 0.45 MPa, 3.2 mm, unannealed	223	°C	ASTM D648

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 1.82 MPa, 3.2mm, unannealed	205	°C	ASTM D648
CTE, -40°C to 40°C, flow	4.E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	1.E-04	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	205	°C	ISO 306
Vicat Softening Temp, Rate B/120	200	°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	223	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	205	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.44	-	ASTM D792
Filler Content	20	%	ASTM D229
Mold Shrinkage on Tensile Bar, flow	0.3 – 0.7	%	SABIC method
Mold Shrinkage on Tensile Bar, xflow	0.4 – 1	%	SABIC method
Density	1.44	g/cm³	ISO 1183
Water Absorption, (23°C/saturated)	0.15	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.03	%	ISO 62
Melt Volume Rate, MVR at 250°C/2.16 kg	40	cm³/10 min	ISO 1133
Melt Viscosity, 250°C, 1500 sec-1	95	Pa-s	ISO 11443
Melt Viscosity, 260°C, 1500 sec-1	55	Pa-s	ISO 11443
ELECTRICAL			
Dielectric Strength, in oil, 0.8 mm	33	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 1.6 mm	25.3	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 3.2 mm	18.6	kV/mm	IEC 60243-1
Dissipation Factor, 1 MHz	0.0182	-	IEC 60250
Comparative Tracking Index	375	V	IEC 60112
INJECTION MOLDING			
Drying Temperature	110 – 120	°C	
Drying Time	2 – 4	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	250 – 270	°C	
Nozzle Temperature	240 – 260	°C	
Front - Zone 3 Temperature	245 – 265	°C	
Middle - Zone 2 Temperature	240 – 255	°C	
Rear - Zone 1 Temperature	230 – 245	°C	
Hopper Temperature	40 – 60	°C	
Mold Temperature	40 – 100	°C	

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