

VALOX™ RESIN SHF436HR

REGION AMERICAS

DESCRIPTION

PBT, Super High Flow, 30% glass reinforced, hydrolytically resistant.

TYPICAL PROPERTY VALUES

Revision 20180920

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	111	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	111	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	11900	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	163	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	8700	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	117	MPa	ISO 527
Tensile Stress, break, 5 mm/min	117	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	2	%	ISO 527
Tensile Strain, break, 5 mm/min	2	%	ISO 527
Tensile Modulus, 1 mm/min	9490	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	165	MPa	ISO 178
Flexural Modulus, 2 mm/min	7720	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	92	J/m	ASTM D256
Izod Impact, notched, -30°C	95	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	6	J	ASTM D3763
Izod Impact, notched 80°10°4 +23°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	8	kJ/m²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	200	°C	ASTM D1525
HDT, 1.82 MPa, 3.2mm, unannealed	214	°C	ASTM D648
CTE, -40°C to 40°C, flow	1.E-04	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	3.E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	1.E-04	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	3.E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	200	°C	ISO 306
Vicat Softening Temp, Rate B/120	200	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80°10°4 sp=64mm	206	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.53	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm	0.3 – 0.5	%	SABIC method
Melt Flow Rate, 250°C/2.16 kgf	30	g/10 min	ASTM D1238

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Density	1.53	g/cm ³	ISO 1183
Water Absorption, (23°C/saturated)	0.28	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.06	%	ISO 62
Melt Volume Rate, MVR at 250°C/2.16 kg	30	cm ³ /10 min	ISO 1133
INJECTION MOLDING			
Drying Temperature	120	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	12	Hrs	
Maximum Moisture Content	0.02	%	
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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