

Valox* Resin SHF434HR

Americas: COMMERCIAL

PBT, Super High Flow, 20% glass reinforced, hydrolytically resistant.

Property

TYPICAL PROPERTIES ⁽¹⁾			
MECHANICAL	Value	Unit	Standard
Tensile Stress, yield, 5 mm/min	103	MPa	ISO 527
Tensile Stress, break, 5 mm/min	103	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	2.2	%	ISO 527
Tensile Strain, break, 5 mm/min	2.2	%	ISO 527
Tensile Modulus, 1 mm/min	6680	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	147	MPa	ISO 178
Flexural Modulus, 2 mm/min	5480	MPa	ISO 178
IMPACT	Value	Unit	Standard
Izod Impact, notched 80*10*4 +23°C	7	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	7	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	6	kJ/m ²	ISO 179/1eA
THERMAL	Value	Unit	Standard
CTE, -40°C to 40°C, flow	4.5E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	1.2E-04	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	202	°C	ISO 306
Vicat Softening Temp, Rate B/120	200	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	204	°C	ISO 75/Af
PHYSICAL	Value	Unit	Standard
Density	1.45	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	0.28	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.06	%	ISO 62
Melt Volume Rate, MVR at 250°C/2.16 kg	27	cm ³ /10 min	ISO 1133

Source GMD, last updated:10/18/2006

Processing

- We cannot overemphasize -- OVERDRYING SHOULD BE AVOIDED. Use a dehumidifying desiccant bed dryer with -30°C (-20°F) dew point air (approximately 1 cfm/lb/hr air flow). Exceeding the temperature or time recommended can compromise the hydrolysis performance of the material or the drying equipment can be damaged.

Parameter	Value	Unit
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

Source GMD, last updated:10/18/2006

- If material is stored in dryer for extended periods (overnight or more):
 - Lower dryer temperature to room temperature.
 - Recirculate cool dry air over material.

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR [\(LOCAL SALES OFFICE\)](#) FOR AVAILABILITY IN YOUR REGION

- (1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.
- (2) Only typical data for selection purposes. Not to be used for part or tool design.
- (3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.
- (4) Internal measurements according to UL standards.

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