

VALOX™ RESIN V8090

REGION EUROPE

DESCRIPTION

VALOX V8090 is a 50% glass fibre reinforced, PBT+PET blend with good surface finish. Applications: EV-Back plates, appliance housings, door handles, mirror brackets.

TYPICAL PROPERTY VALUES

Revision 20231213

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yield, 5 mm/min	180	MPa	ISO 527
Tensile Stress, break, 5 mm/min	180	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	1.6	%	ISO 527
Tensile Strain, break, 5 mm/min	1.6	%	ISO 527
Tensile Modulus, 1 mm/min	18500	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	270	MPa	ISO 178
Flexural Stress, break, 2 mm/min	265	MPa	ISO 178
Flexural Modulus, 2 mm/min	17000	MPa	ISO 178
Tensile Stress, yld, Type I, 5 mm/min	175	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	175	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	1.5	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	1.5	%	ASTM D638
Tensile Modulus, 5 mm/min	18500	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	250	MPa	ASTM D790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	250	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	17000	MPa	ASTM D790
IMPACT			
Izod Impact, notched 80*10*4 +23°C	12	kJ/m ²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	60	kJ/m ²	ISO 180/1U
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	11	kJ/m ²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	62	kJ/m ²	ISO 179/1eU
Izod Impact, notched, 23°C	85	J/m	ASTM D256
Izod Impact, unnotched, 23°C	850	J/m	ASTM D4812
THERMAL			
Vicat Softening Temp, Rate A/50	223	°C	ISO 306
Vicat Softening Temp, Rate B/50	212	°C	ISO 306
Vicat Softening Temp, Rate B/120	212	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	210	°C	ISO 75/Af
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	225	°C	ISO 75/Bf
CTE, 23°C to 150°C, flow	1.25E-05	1/°C	ISO 11359-2
CTE, 23°C to 150°C, xflow	1.15E-04	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	223	°C	ASTM D1525
CTE, 23°C to 150°C, flow	1.25E-05	1/°C	ASTM E831

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, 23°C to 150°C, xflow	1.15E-04	1/°C	ASTM E831
PHYSICAL			
Density	1.77	g/cm ³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.05	%	ISO 62
Water Absorption, (23°C/saturated)	0.16	%	ISO 62-1
Mold Shrinkage, flow, 24 hrs	0.05 – 0.45	%	ISO 294
Mold Shrinkage, xflow, 24 hrs	0.75 – 1.15	%	ISO 294
Melt Volume Rate, MVR at 265°C/5.0 kg	20	cm ³ /10 min	ISO 1133
Melt Viscosity			
260°C, 1500 sec-1	230	Pa-s	ISO 11443
270°C, 1500 sec-1	195	Pa-s	ISO 11443
280°C, 1500 sec-1	155	Pa-s	ISO 11443
Specific Gravity	1.77	-	ASTM D792
Filler Content	50	%	ASTM D229
Moisture Absorption, (23°C/50% RH/24 hrs)	0.05	%	ASTM D570
Water Absorption, (23°C/24hrs)	0.14	%	ASTM D570
Mold Shrinkage, flow, 24 hrs	0.05 – 0.45	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs	0.75 – 1.15	%	ASTM D955
Melt Flow Rate, 265°C/2.16kgf	36	g/10 min	ASTM D1238
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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