



Valox* Resin V2105U

Europe-Africa-Middle East: COMMERCIAL

Unreinforced, Wear resistant, UV Stabilized PBT designed for outdoor, agricultural, industrial and automotive applications. This grade has very high impact strength to stiffness ratio.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	UNIT	STANDARD
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	390	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	590	kgf/cm ²	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	17	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	300	%	ASTM D 638
Tensile Modulus, 5 mm/min	25400	kgf/cm ²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	660	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	21000	kgf/cm ²	ASTM D 790
Tensile Stress, yield, 50 mm/min	40	MPa	ISO 527
Tensile Stress, break, 50 mm/min	52	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	6	%	ISO 527
Tensile Strain, break, 50 mm/min	230	%	ISO 527
Tensile Modulus, 1 mm/min	2540	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	62	MPa	ISO 178
Flexural Modulus, 2 mm/min	1870	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	118	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	15	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	642	cm-kgf	ASTM D 3763
Instrumented Impact Total Energy, -40°C	764	cm-kgf	ASTM D 3673
Izod Impact, notched 80*10*4 +23°C	98	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	15	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	90	kJ/m ²	ISO 179/1eA



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THERMAL			
Vicat Softening Temp, Rate B/50	158	°C	ASTM D 1525
HDT, 1.82 MPa, 3.2mm, unannealed	49	°C	ASTM D 648
CTE, -40°C to 40°C, flow	8.E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	1.2E-04	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	8.E-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	158	°C	ISO 306
Vicat Softening Temp, Rate B/120	158	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	47	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.28	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	2.4 - 3.1	%	GE Method
Melt Flow Rate, 266°C/5.0 kgf	9.5	g/10 min	ASTM D 1238
Density	1.28	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	0.34	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.08	%	ISO 62
Melt Volume Rate, MVR at 265°C/5.0 kg	8	cm ³ /10 min	ISO 1133



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PROCESSING PARAMETERS	TYPICAL VALUE	UNIT
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