



Valox* Resin V3901WX

Americas: COMMERCIAL

PBT/PC blend - Unreinforced, Flame Retardant, Impact Modified, High flow. A UV-stabilized grade designed for outdoor enclosure applications, This grade is UL 746C F1 weatherable rated in all colors based upon high property retention.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	UNIT	STANDARD
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	540	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	430	kgf/cm ²	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	5	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	50	%	ASTM D 638
Tensile Modulus, 5 mm/min	22400	kgf/cm ²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	810	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	22400	kgf/cm ²	ASTM D 790
Tensile Stress, yield, 50 mm/min	51	MPa	ISO 527
Tensile Stress, break, 50 mm/min	40	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4	%	ISO 527
Tensile Strain, break, 50 mm/min	42	%	ISO 527
Tensile Modulus, 1 mm/min	2090	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	73	MPa	ISO 178
Flexural Modulus, 2 mm/min	2130	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	81	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	11	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	509	cm-kgf	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	41	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	8	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	52	kJ/m ²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	105	°C	ASTM D 1525



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THERMAL			
HDT, 1.82 MPa, 3.2mm, unannealed	75	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	96	°C	ASTM D 648
CTE, -40°C to 40°C, flow	8.84E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	8.97E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	8.84E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	8.97E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	121	°C	ISO 306
Vicat Softening Temp, Rate B/120	123	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	77	°C	ISO 75/Af
Relative Temp Index, Elec	120	°C	UL 746B
Relative Temp Index, Mech w/impact	120	°C	UL 746B
Relative Temp Index, Mech w/o impact	120	°C	UL 746B
PHYSICAL			
Specific Gravity	1.3	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	0.7 - 1	%	SABIC Method
Melt Flow Rate, 265°C/2.16kg	14	g/10 min	ASTM D 1238
Density	1.3	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	0.1	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.03	%	ISO 62
Melt Volume Rate, MVR at 265°C/2.16 kg	12	cm ³ /10 min	ISO 1133
FLAME CHARACTERISTICS			
UL Compliant, 94V-0 Flame Class Rating (3)(4)	1.5	mm	UL 94 by GE
UL Compliant, 94-5VA Rating (3)(4)	3	mm	UL 94 by GE
UL Recognized, 94V-0 Flame Class Rating (3)	1.5	mm	UL 94
UL Recognized, 94-5VA Rating (3)	3	mm	UL 94



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TYPICAL PROPERTIES ¹	TYPICAL VALUE	UNIT	STANDARD
FLAME CHARACTERISTICS UV-light, water exposure/immersion	F1	-	UL 746C



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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