

# VALOX<sup>™</sup> Resin 364 Americas: COMMERCIAL

Designed for outdoor telecommunications enclosure applications.

TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	470	kgf/cm <sup>2</sup>	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	400	kgf/cm <sup>2</sup>	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	5	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	70	%	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	680	kgf/cm <sup>2</sup>	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	18900	kgf/cm <sup>2</sup>	ASTM D 790
IMPACT			
Izod Impact, notched, 23°C	76	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -20°C	70	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -40°C	43	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	460	cm-kgf	ASTM D 3763
Instrumented Impact Total Energy, -20°C	456	cm-kgf	ASTM D 3763
Instrumented Impact Total Energy, -40°C	483	cm-kgf	ASTM D 3763
THERMAL			
Vicat Softening Temp, Rate B/50	115	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	103	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	68	°C	ASTM D 648
CTE, -40°C to 40°C, flow	9.5E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	9.8E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	9.5E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	1.E-04	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/120	122	°C	ISO 306
Relative Temp Index, Elec	75	°C	UL 746B

(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.
(5) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surgate or legacy tooling prior to cutting tools for new molded article.
(6) Needs hard coat to consistently pass 60 sec Vertical Burn.

Source GMD, last updated:

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#### Americas: COMMERCIAL

TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	Unit	Standard
THERMAL			
Relative Temp Index, Mech w/impact	75	°C	UL 746B
Relative Temp Index, Mech w/o impact	75	°C	UL 746B
PHYSICAL			
Specific Gravity	1.3	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	0.8 - 1	%	SABIC Method
Mold Shrinkage, xflow, 3.2 mm (5)	0.8 - 1	%	SABIC Method
ELECTRICAL			
Arc Resistance, Tungsten {PLC}	5	PLC Code	ASTM D 495
Hot Wire Ignition (PLC)	2	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	2	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	0	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	0	PLC Code	UL 746A
FLAME CHARACTERISTICS			
UL Recognized, 94V-0 Flame Class Rating (3)	1.47	mm	UL 94
UL Recognized, 94-5VA Rating (3)	2.99	mm	UL 94
Oxygen Index (LOI)	28	%	ASTM D 2863
UV-light, water exposure/immersion	F2	-	UL 746C

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ROCESSING 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	50 - 75	°C
Back Pressure	0.3 - 0.7	MPa
Screw Speed	50 - 100	rpm
Shot to Cylinder Size	40 - 80	%
Vent Depth	0.025 - 0.038	mm

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