

Valox* Resin FV649

Americas: COMMERCIAL

Data for 20% weight reduction at 0.250" wall, 7.5% GR. Improved toughness; chemical resistance, low warpage.

Property

TYPICAL PROPERTIES ⁽¹⁾			
	Value	Unit	Standard
MECHANICAL			
FOAM - MECHANICAL 6.4 mm Wt Reduction	10	%	-
Tensile Stress, yield, 6.35 mm	46	MPa	ASTM D 638
Tensile Strain, break, 6.35 mm	5.4	%	ASTM D 638
Tensile Modulus, 6.4 mm	2990	MPa	ASTM D 638
Flexural Stress, yield, 6.4 mm	80	MPa	ASTM D 790
Flexural Modulus, 6.4 mm	3200	MPa	ASTM D 790
IMPACT			
FOAM - IMPACT 6.4 mm Wt Reduction	10	%	-
Izod Impact, unnotched, 23°C	1068	J/m	ASTM D 4812
Falling Dart Impact, 23°C	108	J	SABIC Method
THERMAL			
FOAM - THERMAL 6.4mm Wt Reduction	10	%	-
HDT, 0.45 MPa, 6.4 mm, unannealed	115	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	107	°C	ASTM D 648
CTE, -40°C to 95°C, flow	3.24E-05	1/°C	ASTM E 831
Specific Heat	1.33	J/g·°C	ASTM C 351
Relative Temp Index, Elec	75	°C	UL 746B
Relative Temp Index, Mech w/impact	75	°C	UL 746B
Relative Temp Index, Mech w/o impact	75	°C	UL 746B
PHYSICAL			
FOAM - PHYSICAL 6.4mm Wt Reduction	10	%	-
Specific Gravity	1.26	-	ASTM D 792
Specific Gravity, foam molded	1.13	-	ASTM D 792
Water Absorption, 24 hours	0.15	%	ASTM D 570
Water Absorption, equilibrium, 23C	0.33	%	ASTM D 570
Mold Shrinkage, flow, 6.4 mm	0.35 - 0.55	%	SABIC Method
ELECTRICAL			
FOAM - ELECTRICAL 6.4 mm Wt Reduction	20	%	-
Volume Resistivity	1.4E+16	Ohm-cm	ASTM D 257
Surface Resistivity	>1.1E+17	Ohm	ASTM D 257
Relative Permittivity, 100 Hz	2.71	-	ASTM D 150
Relative Permittivity, 1 MHz	2.8	-	ASTM D 150
Dissipation Factor, 100 Hz	0.0028	-	ASTM D 150
Dissipation Factor, 1 MHz	0.0347	-	ASTM D 150
Arc Resistance, Tungsten {PLC}	6	PLC Code	ASTM D 495
High Voltage Arc Track Rate {PLC}	3	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	4	PLC Code	UL 746A
FLAME CHARACTERISTICS			
FOAM - Flame Class Minimum Density	1	g/cm ³	-

UL Recognized, 94HB Flame Class Rating (3)	3.98	mm	UL 94
UV-light, water exposure/immersion	F2	-	UL 746C

Source GMD, last updated:12/01/2005

Processing

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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