

VALOX™ RESIN 325

REGION EUROPE

DESCRIPTION

General purpose, unreinforced, improved processing. Applications like sprinklers and nozzles, pumps, door handle, tank covers, pens, pencils etc.

TYPICAL PROPERTY VALUES

Revision 20190814

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	51	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	35	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	3	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	250	%	ASTM D638
Tensile Modulus, 50 mm/min	2400	MPa	ASTM D638
Taber Abrasion, CS-17, 1 kg	9	mg/1000cy	SABIC method
Tensile Stress, yield, 50 mm/min	55	MPa	ISO 527
Tensile Stress, break, 50 mm/min	55	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	3	%	ISO 527
Tensile Strain, break, 50 mm/min	100	%	ISO 527
Tensile Modulus, 1 mm/min	2400	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	80	MPa	ISO 178
Flexural Modulus, 2 mm/min	2100	MPa	ISO 178
Ball Indentation Hardness, H358/30	135	MPa	ISO 2039-1
Hardness, Rockwell R	118	-	ISO 2039-2
IMPACT			
Charpy Impact, unnotched, 23°C	NB	kJ/m²	ISO 179/2C
Charpy Impact, unnotched, -30°C	NB	kJ/m²	ISO 179/2C
Izod Impact, unnotched, 23°C	NB	J/m	ASTM D4812
Izod Impact, unnotched, -30°C	1240	J/m	ASTM D4812
Izod Impact, notched, 23°C	53	J/m	ASTM D256
Izod Impact, notched, 0°C	50	J/m	ASTM D256
Izod Impact, notched, -30°C	50	J/m	ASTM D256
Izod Impact, unnotched 80*10*4 +23°C	NB	kJ/m²	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	NB	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	6	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 0°C	6	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	6	kJ/m²	ISO 180/1A
Charpy Impact, notched, 23°C	6	kJ/m²	ISO 179/2C
Charpy Impact, notched, -30°C	5	kJ/m²	ISO 179/2C
THERMAL			
Vicat Softening Temp, Rate A/50	220	°C	ASTM D1525
Vicat Softening Temp, Rate B/50	175	°C	ASTM D1525
Thermal Conductivity	0.16	W/m·°C	ISO 8302
CTE, 23°C to 80°C, flow	1.3E-04	1/°C	ISO 11359-2

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, 23°C to 80°C, xflow	1.3E-04	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate A/50	220	°C	ISO 306
Vicat Softening Temp, Rate B/50	175	°C	ISO 306
Vicat Softening Temp, Rate B/120	175	°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	115	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	50	°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	140	°C	UL 746B
PHYSICAL			
Specific Gravity	1.31	-	ASTM D792
Mold Shrinkage on Tensile Bar, flow	1.1 – 2	%	SABIC method
Mold Shrinkage on Tensile Bar, xflow	0.9 – 1.8	%	SABIC method
Melt Flow Rate, 265°C/5.0 kgf	50	g/10 min	ASTM D1238
Melt Flow Rate, 266°C/5.0 kgf	50	g/10 min	ASTM D1238
Density	1.31	g/cm³	ISO 1183
Water Absorption, (23°C/saturated)	0.34	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.08	%	ISO 62
Melt Volume Rate, MVR at 250°C/2.16 kg	14	cm³/10 min	ISO 1133
Melt Volume Rate, MVR at 250°C/5.0 kg	30	cm³/10 min	ISO 1133
Melt Volume Rate, MVR at 265°C/5.0 kg	48	cm³/10 min	ISO 1133
Melt Viscosity, 260°C, 1500 sec-1	215	Pa-s	ISO 11443
ELECTRICAL			
Volume Resistivity	>1.E+15	Ω.cm	ASTM D257
Dielectric Strength, in oil, 0.8 mm	31	kV/mm	ASTM D149
Dielectric Strength, in oil, 1.6 mm	25	kV/mm	ASTM D149
Dielectric Strength, in oil, 3.2 mm	15.7	kV/mm	ASTM D149
Relative Permittivity, 1 MHz	3.1	-	ASTM D150
Dissipation Factor, 1 MHz	0.02	-	ASTM D150
Volume Resistivity	>1.E+15	Ω.cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ω	IEC 60093
Dielectric Strength, shorttime, 1.0mm	16	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 0.8 mm	31	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 1.6 mm	25	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 3.2 mm	16	kV/mm	IEC 60243-1
Relative Permittivity, 1 MHz	3.1	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.0003	-	IEC 60250
Dissipation Factor, 1 MHz	0.02	-	IEC 60250
Comparative Tracking Index	600	V	IEC 60112
Comparative Tracking Index, M	350	V	IEC 60112
Relative Permittivity, 50/60 Hz	2.9	-	IEC 60250
FLAME CHARACTERISTICS			
UL Yellow Card Link	E45329-236588	-	-
UL Recognized, 94HB Flame Class Rating	1.5	mm	UL 94

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
UL Recognized, 94HB Flame Class Rating 2nd value	3	mm	UL 94
Glow Wire Flammability Index 750°C, passes at	3.2	mm	IEC 60695-2-12
Glow Wire Flammability Index 850°C, passes at	1	mm	IEC 60695-2-12
Oxygen Index (LOI)	21	%	ISO 4589
INJECTION MOLDING			
Drying Temperature	110 – 120	°C	
Drying Time	2 – 4	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	250 – 270	°C	
Nozzle Temperature	240 – 260	°C	
Front - Zone 3 Temperature	245 – 265	°C	
Middle - Zone 2 Temperature	240 – 255	°C	
Rear - Zone 1 Temperature	230 – 245	°C	
Hopper Temperature	40 – 60	°C	
Mold Temperature	40 – 100	°C	

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