VALOX™ RESIN 325F

REGION EUROPE

DESCRIPTION

VALOX 325F is compliant with food contact regulations acc. to EC Reg. No. 10/2011. VALOX 325F is a general purpose, unreinforced PBT injection moulding resin which contains internal mold release. Available in natural colour only (1001).

TYPICAL PROPERTY VALUES

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Taber Abrasion, CS-17, 1 kg	9	mg/1000cy	SABIC method
Tensile Stress, yield, 50 mm/min	55	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	3	%	ISO 527
Tensile Strain, break, 50 mm/min	60	%	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	2300	MPa	ISO 178
Ball Indentation Hardness, H358/30	85	MPa	ISO 2039-1
Hardness, Rockwell R	117	-	ISO 2039-2
IMPACT			
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	5	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	5	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	4	kJ/m²	ISO 179/1eA
Charpy Impact, notched, 23°C	7	kJ/m²	ISO 179/2C
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	4	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	NB	kJ/m²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	NB	kJ/m²	ISO 179/1eU
THERMAL			
Thermal Conductivity	0.16	W/m-°C	ISO 8302
CTE, 23°C to 80°C, flow	1.3E-04	1/°C	ISO 11359-2
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/Be, 0.45MPa Edgew 120*10*4 sp=100mm	110	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	50	°C	ISO 75/Ae
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			
Mold Shrinkage on Tensile Bar, flow	1.1 – 1.8	%	SABIC method

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Mold Shrinkage on Tensile Bar, xflow	0.9 – 1.8	%	SABIC method
Density	1.31	g/cm³	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 250°C/2.16 kg	18	cm³/10 min	ISO 1133
ELECTRICAL			
Volume Resistivity	>1.E+15	Ohm-cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ohm	IEC 60093
Dielectric Strength, shorttime, 1.0mm	16	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 3.2 mm	18	kV/mm	IEC 60243-1
Relative Permittivity, 1 MHz	3.1	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.002	-	IEC 60250
Dissipation Factor, 1 MHz	0.02	-	IEC 60250
Comparative Tracking Index	600	V	IEC 60112
Relative Permittivity, 50/60 Hz	3.3	-	IEC 60250
FLAME CHARACTERISTICS			
UL Recognized, 94HB Flame Class Rating	1.5	mm	UL 94
UL Recognized, 94HB Flame Class Rating 2nd value	3	mm	UL 94
Glow Wire Flammability Index 850°C, passes at	1	mm	IEC 60695-2-12
Glow Wire Flammability Index 960°C, passes at	3	mm	IEC 60695-2-12
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	