VALOX™ RESIN 325FC

REGION EUROPE

DESCRIPTION

Commercial, VALOX 325FC is compliant with food contact regulations. VALOX 325FC is a general purpose, unreinforced PBT injection moulding resin which contains internal mold release. This new 325FC grade is a good processable resin that exhibits faster and more economical cycle times.

TYPICAL PROPERTY VALUES

Revision 20191016

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	60	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	60	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	7	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	15	%	ASTM D638
Tensile Modulus, 50 mm/min	2500	MPa	ASTM D638
Tensile Stress, yield, 50 mm/min	60	MPa	ISO 527
Tensile Stress, break, 50 mm/min	60	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	10	%	ISO 527
Tensile Strain, break, 50 mm/min	15	%	ISO 527
Tensile Modulus, 1 mm/min	2550	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	85	MPa	ISO 178
Flexural Modulus, 2 mm/min	2400	MPa	ISO 178
Ball Indentation Hardness, H358/30	145	MPa	ISO 2039-1
Hardness, Rockwell R	117	-	ISO 2039-2
IMPACT			
Charpy Impact, unnotched, 23°C	NB	kJ/m²	ISO 179/2C
Charpy Impact, unnotched, -30°C	80	kJ/m²	ISO 179/2C
Izod Impact, unnotched, 23°C	NB	J/m	ASTM D4812
Izod Impact, unnotched, -30°C	NB	J/m	ASTM D4812
Izod Impact, notched, 23°C	38	J/m	ASTM D256
Izod Impact, notched, 0°C	36	J/m	ASTM D256
Izod Impact, notched, -30°C	36	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	100	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	4	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 0°C	4	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	4	kJ/m²	ISO 180/1A
Charpy Impact, notched, 23°C	4	kJ/m²	ISO 179/2C
Charpy Impact, notched, -30°C	4	kJ/m²	ISO 179/2C
THERMAL			
Vicat Softening Temp, Rate A/50	220	°C	ASTM D1525
Vicat Softening Temp, Rate B/50	185	°C	ASTM D1525
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate A/50	220	°C	ISO 306

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Vicat Softening Temp, Rate B/50	185	°C	ISO 306
Vicat Softening Temp, Rate B/120	185	°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	150	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	50	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.31	-	ASTM D792
Mold Shrinkage on Tensile Bar, flow	1.3 – 2.0	%	SABIC method
Mold Shrinkage on Tensile Bar, xflow	1.1 – 2.0	%	SABIC method
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	20	cm³/10 min	ISO 1133
Melt Volume Rate, MVR at 250°C/5.0 kg	50	cm³/10 min	ISO 1133
Melt Viscosity, 260°C, 1500 sec-1	165	Pa-s	ISO 11443
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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