



VALOX™ V2105U resin

General Information

Product Description

Unreinforced, Wear resistant, UV Stabilized PBT designed for outdoor, agricultural, industrial and automotive applications. This grade has very high impact strength to stiffness ratio.

General

Additive	• UV Stabilizer		
Features	• Good Wear Resistance	• High Impact Resistance	• High Stiffness
Uses	• Agricultural Applications • Automotive Applications	• Industrial Applications • Outdoor Applications	
RoHS Compliance	• RoHS Compliant		
Processing Method	• Injection Molding		

ASTM and ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.28		ASTM D792
Density	1.28	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (266°C/5.0 kg)	9.5	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (265°C/5.0 kg)	0.531	in ³ /10min	ISO 1133
Molding Shrinkage - Flow (0.126 in)	0.029 to 0.034	in/in	Internal Method
Molding Shrinkage - Across Flow (0.126 in)	0.025 to 0.030	in/in	Internal Method
Water Absorption (Saturation, 73°F)	0.34	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.080	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ²	363000	psi	ASTM D638
Tensile Modulus	368000	psi	ISO 527-2/1
Tensile Strength ³ (Yield)	5660	psi	ASTM D638
Tensile Stress (Yield)	5800	psi	ISO 527-2/50
Tensile Strength ³ (Break)	8410	psi	ASTM D638
Tensile Stress (Break)	7540	psi	ISO 527-2/50
Tensile Elongation ³ (Yield)	17	%	ASTM D638
Tensile Strain (Yield)	6.0	%	ISO 527-2/50
Tensile Elongation ³ (Break)	300	%	ASTM D638
Tensile Strain (Break)	230	%	ISO 527-2/50
Flexural Modulus ⁴ (1.97 in Span)	299000	psi	ASTM D790
Flexural Modulus ⁵	272000	psi	ISO 178
Flexural Stress ^{5, 6}	8990	psi	ISO 178

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Mechanical	Nominal Value	Unit	Test Method
Flexural Strength ⁴ (Yield, 1.97 in Span)	9430	psi	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁷ (73°F)	43	ft·lb/in ²	ISO 179/1eA
Notched Izod Impact			ASTM D256
-22°F	2.8	ft·lb/in	
73°F	22	ft·lb/in	
Notched Izod Impact Strength ⁸			ISO 180/1A
-22°F	7.1	ft·lb/in ²	
73°F	47	ft·lb/in ²	
Instrumented Dart Impact			ASTM D3763
-40°F, Total Energy	664	in·lb	
73°F, Total Energy	558	in·lb	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
264 psi, Unannealed, 0.126 in	120	°F	
Heat Deflection Temperature ⁹			ISO 75-2/Af
264 psi, Unannealed, 2.52 in Span	117	°F	
Vicat Softening Temperature	316	°F	ASTM D1525 ¹⁰
Vicat Softening Temperature			
--	316	°F	ISO 306/B50
--	316	°F	ISO 306/B120
CLTE - Flow (-40 to 104°F)	4.4E-5	in/in/°F	ASTM E831
CLTE - Flow (-40 to 104°F)	4.4E-5	in/in/°F	ISO 11359-2
CLTE - Transverse (-40 to 104°F)	6.7E-5	in/in/°F	ASTM E831
CLTE - Transverse (-40 to 104°F)	6.7E-5	in/in/°F	ISO 11359-2

Processing Information			
Injection	Nominal Value	Unit	
Drying Temperature	250	°F	
Drying Time	3.0 to 4.0	hr	
Drying Time, Maximum	12	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	40 to 80	%	
Rear Temperature	460 to 490	°F	
Middle Temperature	470 to 500	°F	
Front Temperature	480 to 510	°F	
Nozzle Temperature	470 to 500	°F	
Processing (Melt) Temp	480 to 510	°F	
Mold Temperature	150 to 190	°F	
Back Pressure	50.0 to 100	psi	
Screw Speed	50 to 80	rpm	
Vent Depth	1.0E-3 to 1.5E-3	in	