Technical Data Sheet

Vitamide 6 BX30 HT WHI6616

Polyamide 6

Product Description

Vitamide FR VIT 6 BX30 HTWHI6616 is a Polyamide 6 material and is typically used in Injection Molding applications.

Processing Method Injection Molding

Typical Properties	Nominal Value	Units	Test Method
Physical			
Density	1.36	g/cm³	ISO 1183
Viscosity Number, (96% H2SO4 (Sulphuric Acid))	145	cm³/g	ISO 307
Mechanical			
Tensile Stress at Yield			
(Type 1A, 50 mm/min)	75.0	MPa	ISO 527-2
(Type 1A, 50 mm/min) - Conditioned	40.0	MPa	ISO 527-2
Nominal Tensile Strain at Break			
(50 mm/min, Type 1A) - Conditioned	100	%	ISO 527-2
(50 mm/min, Type 1A)	13	%	ISO 527-2
Tensile Strain at Break			
(Type 1A, 50 mm/min)	55	%	ISO 527-2
(Type 1A, 50 mm/min) - Conditioned	40	%	ISO 527-2
Flexural Modulus, (2.0 mm/min)	3200	MPa	ISO 178
Tensile Strain at Yield			
(Type 1A, 50 mm/min)	4.5	%	ISO 527-2
(Type 1A, 50 mm/min) - Conditioned	30	%	ISO 527-2
Tensile Modulus			
(1 mm/min, Type 1A)	3500	MPa	ISO 527-1
(1 mm/min, Type 1A) - Conditioned	1100	MPa	ISO 527-1
Flexural Stress			
(2.0 mm/min, 6.0%)	110	MPa	ISO 178
(Type 1A, 2.0 mm/min, 3.5%)	95.0	MPa	ISO 178
Impact			
Charpy Impact Strength - Notched			
(23 °C, Type 1, Edgewise, Notch A)	5.5	kJ/m²	ISO 179
(-30 °C, Type 1, Edgewise, Notch A)	4.0	kJ/m²	ISO 179
(23 °C, Type 1, Edgewise, Notch A) - Conditioned	13	kJ/m²	ISO 179

Charpy Impact Strength - Unnotched			
(23 °C, Type 1, Edgewise)	90	kJ/m²	ISO 179
(-30 °C, Type 1, Edgewise)	90	kJ/m²	ISO 179
(23 °C, Type 1, Edgewise) - Conditioned	No Break		ISO 179
Thermal			
Vicat Softening Temperature			
(B (50N), 50 °C/h)	195	°C	ISO 306
(A (10N), 50 °C/h)	215	°C	ISO 306
Deflection Temperature Under Load Unannealed (0.45 MPa)	155	°C	ISO 75-2/B
Deflection Temperature Under Load Unannealed (1.80 MPa)	60	°C	ISO 75-2/A
Electrical			
Comparative Tracking Index (CTI), (Solution A)	550	V	IEC 60112
Flammable			
Burning Rate			
(2.00 mm)	<100	mm/min	FMVSS 302
(2.00 mm)	<100	mm/min	ISO 3795
Glow Wire Flammability Index			
(0.75 mm)	960	°C	IEC 60695-2-12
(1.5 mm)	960	°C	IEC 60695-2-12
(3.0 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature			
(0.75 mm)	800	°C	IEC 60695-2-13
(1.5 mm)	800	°C	IEC 60695-2-13
(3.0 mm)	800	°C	IEC 60695-2-13
UL Information			
Flame Rating			
(1.6 mm)	V-0		UL 94
(3.2 mm)	V-0		UL 94
(0.8 mm)	V-0		UL 94
Flammability Classification			
(0.8 mm)	V-0		IEC 60695-11-10, -20
(1.6 mm)	V-0		IEC 60695-11-10, -20
(3.2 mm)	V-0		IEC 60695-11-10, -20

Injection Parameters	Nominal Value	Units
Drying Time	3.0 to 4.0	hr
Drying Temperature	80	°C
Suggested Max Moisture	0.040 to 0.10	%
Screw Speed	<250	mm/sec
Processing (Melt) Temp	240 to 260	°C
Injection Rate	Slow-Moderate	
Mold Temperature	60 to 100	°C