

Technical Data Sheet

Vitamide BF13 BLK 2421



Polyamide 6

Product Description

Vitamide BF13 BK 2421 is a Polyamide 6 material and is typically used in Injection Molding applications.

Regulatory Status

For regulatory compliance information, see Vitamide BF13 BLK 2421 [Product Stewardship Bulletin \(PSB\)](#) and [Safety Data Sheet \(SDS\)](#).

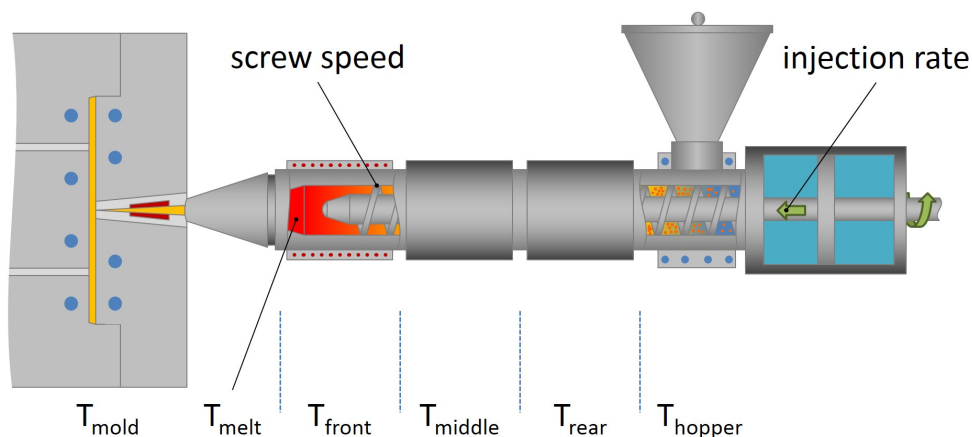
Status Commercial: Active

Availability Africa-Middle East; Asia-Pacific; Europe; Latin America; North America

Processing Method Injection Molding

Typical Properties	Nominal Value	Units	Test Method
Physical			
Density	1.18	g/cm ³	ISO 1183
Viscosity Number, (96% H ₂ SO ₄ (Sulphuric Acid))	145	cm ³ /g	ISO 307
Mechanical			
Tensile Strength	70	MPa	ISO 527-2
- Conditioned	45	MPa	ISO 527-2
Tensile Strain at Break, (Type 1A, 5 mm/min)	3.5	%	ISO 527-2
Flexural Modulus, (2.0 mm/min)	3300	MPa	ISO 178
Tensile Stress at Break, (Type 1A, 5 mm/min)	70.0	MPa	ISO 527-2
Tensile Modulus			
(1 mm/min, Type 1A)	3500	MPa	ISO 527-1
(1 mm/min, Type 1A) - Conditioned	1300	MPa	ISO 527-1
Flexural Stress, (2.0 mm/min, 5.8%)	125	MPa	ISO 178
Tensile Strain at Tensile Strength	3	%	ISO 527-2
- Conditioned	30	%	ISO 527-2
Impact			
Charpy Impact Strength - Notched			
(23 °C, Type 1, Edgewise, Notch A)	4.0	kJ/m ²	ISO 179
(-30 °C, Type 1, Edgewise, Notch A)	3.0	kJ/m ²	ISO 179
(23 °C, Type 1, Edgewise, Notch A) - Conditioned	8.0	kJ/m ²	ISO 179
Charpy Impact Strength - Unnotched			
(23 °C, Type 1, Edgewise)	50	kJ/m ²	ISO 179
(-30 °C, Type 1, Edgewise)	40	kJ/m ²	ISO 179
(23 °C, Type 1, Edgewise) - Conditioned	No Break		ISO 179
Thermal			
Vicat Softening Temperature			
(B (50N), 50 °C/h)	200	°C	ISO 306
(A (10N), 50 °C/h)	215	°C	ISO 306
Deflection Temperature Under Load Unannealed (0.45 MPa)	175	°C	ISO 75-2/B
Deflection Temperature Under Load Unannealed (1.80 MPa)	70	°C	ISO 75-2/A
Electrical			

Comparative Tracking Index (CTI), (Solution A)	600	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)	775	°C	IEC 60695-2-13
(1.5 mm)	775	°C	IEC 60695-2-13
(3.0 mm)	775	°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

Notes

These are typical property values not to be construed as specification limits.

Processing notes

Melt contacting surfaces should be made of a high quality, corrosive resistant steel. Positive experiences have been made with steel qualities containing > 12% chromium.

Avoid processing at very barrel high temperatures or above the recommended melt temperature range as this can increase risk of deposit onto the tool surfaces. Avoid long residence times. At start and end of production, it is recommended to purge clean with non-flame retardant polymer or a polyolefin.

Processing Techniques

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

Company Information

For further information regarding the LyondellBasell company, please visit <http://www.lyb.com/>.

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