



Ultramid® HFX 33

BASF Corporation - Polyamide 6

Monday, November 4, 2019

General Information

Product Description

Ultramid HFX 33 is a polyamide specialty extrusion resin combining high flexibility, excellent burst performance and outstanding chemical resistance. It offers high melt strength and enhanced heat stability.

Applications

Ultramid HFX 33 is recommended for tubing applications requiring an outstanding balance of flexibility, chemical and heat resistance and burst performance.

General

Material Status	• Commercial: Active
Availability	• Asia Pacific • North America
Features	• Chemical Resistant • High Flexibility • Good Thermal Stability • High Melt Strength
Uses	• Tubing
Agency Ratings	• EC 1907/2006 (REACH)
RoHS Compliance	• RoHS Compliant
Forms	• Pellets
Processing Method	• Extrusion

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.04	g/cm ³	ISO 1183
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (73°F)	62400	psi	ISO 527-2
Tensile Stress (Break, 73°F)	5800	psi	ISO 527-2
Flexural Modulus (73°F)	58000	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (73°F)	55	ft-lb/in ²	ISO 179
Notched Izod Impact Strength (73°F)	43	ft-lb/in ²	ISO 180
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (264 psi, Unannealed)	104	°F	ISO 75-2/A
Melting Temperature (DSC)	428	°F	ISO 3146

Processing Information

Extrusion	Nominal Value	Unit
Drying Temperature	149	°F
Drying Time	2.0 to 4.0	hr
Suggested Max Moisture	0.10	%
Cylinder Zone 1 Temp.	437 to 473	°F
Cylinder Zone 3 Temp.	437 to 482	°F
Cylinder Zone 5 Temp.	437 to 473	°F
Flange Temperature	446 to 473	°F
Melt Temperature	437 to 473	°F
Head Temperature	446 to 473	°F
Die Temperature	446 to 473	°F

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Extrusion	Nominal Value	Unit
Extruder Screw L/D Ratio	20.0:1.0 to 24.0:1.0	
Extruder Screw Compression Ratio	3.5:1.0 to 4.0:1.0	

Extrusion Notes

Screw Parameters

- Metering Section : 40%
- Transition Section : 3 to 4 flights
- Feed Section : balance of screw length

Notes

¹ Typical properties: these are not to be construed as specifications.