

Ultramid® 8350 HS BK-102

Polyamide 6

BASF Corporation

Message:

Ultramid 8350 HS BK-102 is a type 6, black pigmented, impact modified graft copolymer developed for extrusion, tubing, and jacketing applications requiring a high level of toughness combined with a moderate level of flexibility.

Applications

Ultramid 8350 HS BK-102 is generally recommended for applications such as automotive vacuum tubing, cable jacketing, and high pressure and hydraulic hoses.

General Information				
UL YellowCard		E36632-231157		
Additive		Impact modifier		
Features		Impact modification		
		Copolymer		
		Good flexibility		
		Good toughness		
Uses		Cable sheath		
		Pipe		
		Pipe fittings		
		Application in Automobile Field		
		Hydraulic application		
Agency Ratings		EC 1907/2006 (REACH)		
RoHS Compliance		RoHS compliance		
Appearance		Black		
Forms		Particle		
Processing Method		Extrusion		
Physical	Dry	Conditioned	Unit	Test Method
Specific Gravity	1.07	--	g/cm ³	ASTM D792, ISO 1183
Molding Shrinkage - Flow (3.18 mm)	1.4	--	%	
Water Absorption				
24 hr	1.1	--	%	ASTM D570
23°C, 24 hr	1.1	--	%	ISO 62
Saturation	6.7	--	%	ASTM D570
Saturated, 23°C	6.7	--	%	ISO 62
Balance, 50% RH	1.9	--	%	ASTM D570
Equilibrium, 23°C, 50% RH	1.9	--	%	ISO 62
Hardness	Dry	Conditioned	Unit	Test Method

Rockwell Hardness (R-Scale)	78	--		ASTM D785
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	1800	675	MPa	ISO 527-2
Tensile Strength				
Yield, 23°C	55.0	32.0	MPa	ASTM D638
Yield, 23°C	52.0	32.0	MPa	ISO 527-2
Tensile Elongation				
Yield, 23°C	5.0	9.0	%	ASTM D638
Yield, 23°C	4.5	9.0	%	ISO 527-2
Fracture, 23°C	> 100	> 100	%	ASTM D638
Nominal Tensile Strain at Break (23°C)	> 50	> 50	%	ISO 527-2
Flexural Modulus				
23°C	1890	--	MPa	ASTM D790
23°C	1600	--	MPa	ISO 178
Flexural Strength				
23°C	65.0	--	MPa	ASTM D790
23°C	55.0	--	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength (23°C)	83	--	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	No Break	--		ISO 179
Notched Izod Impact				
23°C	No Break	--		ASTM D256, ISO 180
-40°C	10	--	kJ/m ²	ISO 180
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				
1.8 MPa, not annealed	56.0	--	°C	ASTM D648
1.8 MPa, not annealed	50.0	--	°C	ISO 75-2/A
Peak Melting Temperature	220	--	°C	ASTM D3418, ISO 3146
CLTE - Flow	1.1E-4	--	cm/cm/°C	ASTM E831
RTI Elec				UL 746
1.50 mm	65.0	--	°C	UL 746
3.00 mm	65.0	--	°C	UL 746
RTI Imp				UL 746
1.50 mm	65.0	--	°C	UL 746
3.00 mm	65.0	--	°C	UL 746
RTI				UL 746
1.50 mm	65.0	--	°C	UL 746
3.00 mm	65.0	--	°C	UL 746
Electrical	Dry	Conditioned	Unit	Test Method

Volume Resistivity				
1.50 mm	> 1.0E+13	--	ohms·cm	ASTM D257
--	> 1.0E+13	--	ohms·cm	IEC 60093
Comparative Tracking Index	600	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
1.50 mm	HB	--		UL 94
3.00 mm	HB	--		UL 94
Extrusion	Dry	Unit		
Drying Temperature	80.0		°C	
Drying Time	2.0 - 4.0		hr	
Suggested Max Moisture	0.10		%	
Cylinder Zone 1 Temp.	245 - 260		°C	
Cylinder Zone 3 Temp.	240 - 255		°C	
Cylinder Zone 5 Temp.	240 - 250		°C	
Flange temperature	225 - 240		°C	
Head Temperature	225 - 245		°C	
Extruder Screw L/D Ratio	20.0:1 to 24.0:1.0			
Extruder Screw Compression Ratio	3.5:1.0 to 4.0:1.0			
Melt Temperature	240 - 250		°C	
Die Temperature	225 - 240		°C	
Extrusion instructions				

Screw Parameters

Metering Section : 40%

Transition Section : 6 to 7 flights

Feed Section : balance of screw length

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