

Ultramid® 8253 HS BK-102

Polyamide 6

BASF Corporation

Message:

Ultramid 8253 HS BK-102 is a heat stabilized, pigmented black, impact modified type 6 nylon graft copolymer developed for both injection molding and extrusion applications. It exhibits varying levels of toughness and flexibility combined with excellent thermal and chemical properties.

Applications

Ultramid 8253 HS BK-102 is generally recommended for applications such as plugs, receptacles, flexible connector covers, weed trimmer components, clips fasteners, flanges, key housings as well as many flexible tubing applications.

General Information			
UL YellowCard	E36632-231135		
Additive	Heat Stabilizer		
	Impact Modifier		
Features	Copolymer		
	Good Chemical Resistance		
	Good Flexibility		
	Good Toughness		
	Heat Stabilized		
	High Heat Resistance		
	Impact Modified		
Uses	Fasteners		
	Housings		
	Lawn and Garden Equipment		
	Plugs		
	Protective Coverings		
	Tubing		
Agency Ratings	EC 1907/2006 (REACH)		
RoHS Compliance	RoHS Compliant		
Appearance	Black		
Forms	Pellets		
Processing Method	Extrusion		
	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.09	g/cm ³	ASTM D792, ISO 1183
Molding Shrinkage - Flow (3.18 mm)	1.2	%	
Water Absorption			

24 hr	1.5	%	ASTM D570
23°C, 24 hr	1.5	%	ISO 62
Saturation	8.1	%	ASTM D570
Saturation, 23°C	8.1	%	ISO 62
Equilibrium, 50% RH	2.3	%	ASTM D570
Equilibrium, 23°C, 50% RH	2.3	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	82		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	2400	MPa	ISO 527-2
Tensile Strength			
Yield, 23°C	65.0	MPa	ASTM D638
Yield, 23°C	60.0	MPa	ISO 527-2
Tensile Elongation			
Yield, 23°C	4.0	%	ASTM D638, ISO 527-2
Break, 23°C	> 100	%	ASTM D638
Nominal Tensile Strain at Break (23°C)	40	%	ISO 527-2
Flexural Modulus			
23°C	2270	MPa	ASTM D790
23°C	1900	MPa	ISO 178
Flexural Strength			
23°C	85.0	MPa	ASTM D790
23°C	65.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	17	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	No Break		ISO 179
Notched Izod Impact			
23°C	150	J/m	ASTM D256
23°C	14	kJ/m ²	ISO 180
Drop Impact Resistance (23°C)	271	J	Internal Method
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, Unannealed	60.0	°C	ASTM D648
1.8 MPa, Unannealed	55.0	°C	ISO 75-2/A
Peak Melting Temperature	220	°C	ASTM D3418, ISO 3146
CLTE - Flow	9.9E-5	cm/cm/°C	ASTM E831
RTI Elec			UL 746
0.710 mm	105	°C	
0.750 mm	105	°C	
1.50 mm	105	°C	
3.00 mm	105	°C	
6.00 mm	105	°C	

RTI Imp		UL 746
0.710 mm	95.0	°C
0.750 mm	95.0	°C
1.50 mm	105	°C
3.00 mm	105	°C
6.00 mm	105	°C
RTI Str		UL 746
0.710 mm	95.0	°C
0.750 mm	95.0	°C
1.50 mm	105	°C
3.00 mm	105	°C
6.00 mm	105	°C
Flammability	Nominal Value	Test Method
Flame Rating		UL 94
0.750 mm	HB	
1.50 mm	HB	
3.00 mm	HB	
6.00 mm	HB	
Injection	Nominal Value	Unit
Drying Temperature	80.0	°C
Drying Time	2.0 to 4.0	hr
Suggested Max Moisture	0.20	%
Processing (Melt) Temp	240 to 270	°C
Mold Temperature	60.0 to 85.0	°C
Injection Pressure	3.50 to 12.5	MPa
Injection Rate	Fast	

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