

Ultramid® 8255 HS

Polyamide 6

BASF Corporation

Message:

Ultramid 8255 HS is a heat stabilized, 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 resistance properties provided by the nylon backbone. It maintains its inherent chemical resistance to greases, oils and hydrocarbons.

Applications

Ultramid 8255 HS is generally recommended for applications such as clips and fasteners, bowling pin bases and flexible connectors.

General Information			
Additive	Impact modifier		
	heat stabilizer		
Features	Impact modification		
	Copolymer		
	Good chemical resistance		
	Hydrocarbon resistance		
	Oil resistance		
	Grease resistance		
	Thermal Stability		
Uses	Fasteners		
	Connector		
	Sporting goods		
Agency Ratings	EC 1907/2006 (REACH)		
RoHS Compliance	RoHS compliance		
Forms	Particle		
Processing Method	Extrusion		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.08	g/cm ³	ASTM D792, ISO 1183
Molding Shrinkage - Flow (3.18 mm)	1.3	%	
Water Absorption			
24 hr	1.2	%	ASTM D570
23°C, 24 hr	1.2	%	ISO 62
Saturation	7.1	%	ASTM D570
Saturated, 23°C	7.1	%	ISO 62
Balance, 50% RH	2.0	%	ASTM D570

Equilibrium, 23°C, 50% RH	2.0	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	52		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	780	MPa	ISO 527-2
Tensile Strength (Yield, 23°C)	36.0	MPa	ASTM D638, ISO 527-2
Tensile Elongation			
Yield, 23°C	30	%	ASTM D638
Yield, 23°C	7.0	%	ISO 527-2
Fracture, 23°C	> 100	%	ASTM D638
Nominal Tensile Strain at Break (23°C)	> 50	%	ISO 527-2
Flexural Modulus			ASTM D790
-40°C	2830	MPa	ASTM D790
23°C	700	MPa	ASTM D790
65°C	195	MPa	ASTM D790
90°C	160	MPa	ASTM D790
121°C	145	MPa	ASTM D790
Flexural Strength			ASTM D790
-40°C	124	MPa	ASTM D790
23°C	28.0	MPa	ASTM D790
65°C	10.0	MPa	ASTM D790
90°C	9.00	MPa	ASTM D790
121°C	8.00	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	50	kJ/m ²	ISO 179
Notched Izod Impact (23°C)	320	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, not annealed	48.0	°C	ASTM D648
1.8 MPa, not annealed	42.0	°C	ISO 75-2/A
Peak Melting Temperature	220	°C	ASTM D3418, ISO 3146
Extrusion	Nominal Value	Unit	Test Method
Drying Temperature	65.0	°C	
Drying Time	2.0 - 4.0	hr	
Suggested Max Moisture	0.10	%	
Cylinder Zone 1 Temp.	245 - 255	°C	
Cylinder Zone 3 Temp.	245 - 260	°C	
Cylinder Zone 5 Temp.	240 - 250	°C	
Flange temperature	230 - 245	°C	
Head Temperature	230 - 245	°C	
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		

Melt Temperature	240 - 250	°C
Die Temperature	230 - 245	°C
Extrusion instructions		

Screw Parameters

Metering Section: 40%

Transition Section: 3 to 4 flights

Feed Section: balance of screw length

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