Product Information

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Ultramid® 8253 HS
Polyamide 6

BASF The Chemical Company

Product Description

This resin is a heat stabilized, impact modified type 6 graft copolymer developed for both injection molding and extrusion applications requiring improved dry as molded toughness and increased flexibility. It is also available in non-heat stabilized (Ultramid 8253) and/or pigmented versions.

Applications

Ultramid 8253 HS 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.

PHYSICAL	ISO Test Method	Property Value	
Density, g/cm	1183	1.09	
Moisture, %	62		
(24 Hour)		1.5	
(50% RH)		2.3	
(Saturation)		8.1	
MECHANICAL	**ISO Test Method**	**Dry**	**Conditioned**
Tensile Modulus, MPa	527		
-40C		2,835	3,300
23C		2,300	730
80C		400	370
121C		295	220
Tensile stress at yield, MPa	527		
-40C		117	116
23C		60	32
80C		25	20
121C		20	-
Tensile stress at break, MPa	527		
Tensile strain at yield, %	527		
23C		4	15
Nominal strain at break, %	527		
23C		40	>50
Flexural Strength, MPa	178		
23C		65	-
Flexural Modulus, MPa	178		
23C		1,900	-
IMPACT	**ISO Test Method**	**Dry**	**Conditioned**
Charpy Notched, kJ/m^2	179		
23C		18	-
-30C		5	-
Charpy Unnotched, kJ/m^2	179		
23C		N	-
THERMAL	**ISO Test Method**	**Dry**	**Conditioned**

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Melting Point, C	3146	220	-
HDT A, C	75	55	-
Coef. of Linear Thermal Expansion, Parallel, mm/mm C		0.88 X10-4	-
Coef. of Linear Thermal Expansion, Normal, mm/mm C		0.93 X10-4	-

ELECTRICAL	ISO Test Method	Dry	Conditioned
Comparative Tracking Index	IEC 60112	600	-
Volume Resistivity	IEC 60093	>1E13	-

UL RATINGS	UL Test Method	Property Value
Flammability Rating, 1.5mm	UL94	HB
Relative Temperature Index, 1.5mm	UL746B	
Mechanical w/o Impact, C		105
Mechanical w/ Impact, C		105
Electrical, C		105

Processing Guidelines

Material Handling
Max. Water content: 0.2%
Product is supplied in sealed containers and drying prior to molding is not required. If drying becomes necessary, a dehumidifying or desiccant dryer operating at 80 degC (176 degF) is recommended. Drying time is dependent on moisture level, but 2-4 hours is generally sufficient. Further information concerning safe handling procedures can be obtained from the Material Safety Data Sheet. Alternatively, please contact your BASF representative.

Typical Profile
Melt Temperature 240-270 degC (464-518 degF)
Mold Temperature 60-85 degC (140-185 degF)
Injection and Packing Pressure 35-125 bar (500-1500 psi)

Mold Temperatures
A mold temperature of 60-85 degC (140-185 degF) is recommended, but temperatures of as low as 10 degC (50 degF) can be used where applicable.

Pressures
Injection pressure controls the filling of the part and should be applied for 90% of ram travel. Packing pressure affects the final part and can be used effectively in controlling sink marks and shrinkage. It should be applied and maintained until the gate area is completely frozen off.

Fill Rate
Fast fill rates are recommended to ensure uniform melt delivery to the cavity and prevent premature freezing.

Note