Ultramid® HPN 9362

Polyamide 6

BASF Corporation

Message:

Ultramid HPN 9362 is a 40% mineral reinforced, impact modified PA6 injection molding compound. It is one of the High Productivity Nylon series having improved surface appearance while reducing cycle time. It possesses excellent balance of strength, stiffness and toughness combined with a high level of drop weight impact, excellent processability and chemical resistance to greases, oils and hydrocarbons.
Applications
Ultramid HPN 9362 is generally recommended for applications such as wheel cover and hubs, mirror housings, appliance components, power tool housings, small engine pulleys, and trimmer spools.

General Information	
UL YellowCard	E36632-231190
Filler / Reinforcement	Mineral,40% Filler by Weight
Additive	Impact Modifier
Features	Good Chemical Resistance Good Processability Good Stiffness Good Strength Good Surface Finish Good Toughness Grease Resistant Hydrocarbon Resistant Impact Modified Oil Resistant
Uses	Appliance Components Automotive Applications Housings Lawn and Garden Equipment Power/Other Tools
Agency Ratings	EC 1907/2006 (REACH)
RoHS Compliance	RoHS Compliant
Forms	Pellets
Processing Method	Injection Molding
Multi-Point Data	Isothermal Stress vs. Strain (ISO 11403-1) Secant Modulus vs. Strain (ISO 11403-1)

Physical	Dry	Conditioned	Unit	Test Method
Specific Gravity	1.41	--	g/cm³	ASTM D792, ISO 1183

Molding Shrinkage - Flow (3.18 mm)	1.0	--	%	
Water Absorption				
Saturation	4.9	--	%	ASTM D570
Saturation, 23°C	4.9	--	%	ISO 62
Equilibrium, 50% RH	1.4	--	%	ASTM D570
Equilibrium, 23°C, 50% RH	1.4	--	%	ISO 62
Hardness	**Dry**	**Conditioned**	**Unit**	**Test Method**
Rockwell Hardness (R-Scale)	119	--		ASTM D785
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus (23°C)	4330	2900	MPa	ISO 527-2
Tensile Strength				
Yield, 23°C	64.0	45.0	MPa	ASTM D638
Yield, 23°C	65.0	45.0	MPa	ISO 527-2
Break, 23°C	62.0	45.0	MPa	ASTM D638
Tensile Elongation				
Yield, 23°C	3.0	27	%	ASTM D638, ISO 527-2
Break, 23°C	15	30	%	ASTM D638
Flexural Modulus				ASTM D790
-40°C	5230	--	MPa	
23°C	4000	1560	MPa	
65°C	1250	970	MPa	
90°C	770	850	MPa	
121°C	750	740	MPa	
Flexural Strength				ASTM D790
-40°C	180	155	MPa	
23°C	109	50.0	MPa	
65°C	45.0	35.0	MPa	
90°C	30.0	30.0	MPa	
121°C	30.0	25.0	MPa	
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength				ISO 179
-30°C	3.0	--	kJ/m^2	
23°C	6.0	--	kJ/m^2	
Notched Izod Impact (23°C)	86	--	J/m	ASTM D256
Drop Impact Resistance (23°C)	74.6	--	J	Internal Method
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Deflection Temperature Under Load (1.8 MPa, Unannealed)	80.0	--	°C	ASTM D648

Peak Melting Temperature	220	--	°C	ASTM D3418, ISO 3146
CLTE - Flow	2.3E-5	--	cm/cm/°C	ASTM E831
RTI Elec				UL 746
0.750 mm	65.0	--	°C	
1.50 mm	65.0	--	°C	
3.00 mm	65.0	--	°C	
RTI Imp				UL 746
0.750 mm	65.0	--	°C	
1.50 mm	65.0	--	°C	
3.00 mm	65.0	--	°C	
RTI Str				UL 746
0.750 mm	65.0	--	°C	
1.50 mm	65.0	--	°C	
3.00 mm	65.0	--	°C	

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

Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.750 mm	HB	--		
1.50 mm	HB	--		
3.00 mm	HB	--		

Injection	Dry	Unit
Drying Temperature	83.0	°C
Drying Time	2.0 to 4.0	hr
Suggested Max Moisture	0.15	%
Processing (Melt) Temp	270 to 295	°C
Mold Temperature	80.0 to 95.0	°C
Injection Pressure	3.50 to 12.5	MPa
Injection Rate	Fast	

Recommended distributors for this material

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