Ultramid® 8202C HS

Polyamide 6

BASF Corporation

Message:

Ultramid 8202C HS is a heat stabilized, low viscosity, PA6 injection molding homopolymer possessing a modified crystalline structure for increased property performance and faster cycles. It is also available in pigmented versions.
Applications
Ultramid 8202C HS is generally recommended for applications such as gears, valves, fittings, insulators, bushings, slides, window hardware, wiring devices, textile components and furniture casters.

General Information	
Additive	Heat Stabilizer
Features	Crystalline Fast Molding Cycle Heat Stabilized Homopolymer Low Viscosity
Uses	Bushings Electrical Parts Fittings Furniture Gears Insulation Textile Applications Valves/Valve Parts
Agency Ratings	EC 1907/2006 (REACH)
RoHS Compliance	RoHS Compliant
Appearance	Colors Available
Forms	Pellets
Processing Method	Injection Molding

Physical	Dry	Conditioned	Unit	Test Method
Specific Gravity	1.13	--	g/cm³	ASTM D792, ISO 1183
Molding Shrinkage - Flow (3.18 mm)	0.90	--	%	
Water Absorption				
24 hr	1.6	--	%	ASTM D570
23°C, 24 hr	1.6	--	%	ISO 62
Saturation	9.3	--	%	ASTM D570
Saturation, 23°C	9.3	--	%	ISO 62
Equilibrium, 50% RH	2.6	--	%	ASTM D570

Equilibrium, 23°C, 50% RH	2.6	--	%	ISO 62
Hardness	**Dry**	**Conditioned**	**Unit**	**Test Method**
Rockwell Hardness (R-Scale)	120	--		ASTM D785
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus				ISO 527-2
-40°C	4090	--	MPa	
23°C	3700	1360	MPa	
80°C	750	--	MPa	
121°C	550	--	MPa	
Tensile Strength				
Yield, -40°C	137	142	MPa	ASTM D638, ISO 527-2
Yield, 23°C	90.0	48.0	MPa	ASTM D638
Yield, 80°C	40.0	30.0	MPa	ASTM D638, ISO 527-2
Yield, 121°C	30.0	25.0	MPa	ASTM D638, ISO 527-2
Yield, 23°C	88.0	43.0	MPa	ISO 527-2
Break, -40°C	130	80.0	MPa	ASTM D638
Break, 23°C	90.0	70.0	MPa	ASTM D638
Break, 80°C	35.0	30.0	MPa	ASTM D638
Break, 121°C	25.0	20.0	MPa	ASTM D638
Tensile Elongation				
Yield, -40°C	3.0	3.0	%	ASTM D638
Yield, 23°C	4.0	22	%	ASTM D638, ISO 527-2
Yield, 80°C	25	25	%	ASTM D638
Yield, 121°C	27	30	%	ASTM D638
Break, -40°C	5.0	3.0	%	ASTM D638
Break, 23°C	12	> 100	%	ASTM D638
Break, 80°C	> 100	> 100	%	ASTM D638
Break, 121°C	> 100	> 100	%	ASTM D638
Nominal Tensile Strain at Break (23°C)	7.0	> 50	%	ISO 527-2
Flexural Modulus				
-40°C	3370	4200	MPa	ASTM D790
23°C	3170	970	MPa	ASTM D790
65°C	600	--	MPa	ASTM D790
90°C	440	--	MPa	ASTM D790
121°C	385	--	MPa	ASTM D790
23°C	2800	--	MPa	ISO 178
Flexural Strength				
-40°C	183	168	MPa	ASTM D790
23°C	110	42.0	MPa	ASTM D790
65°C	30.0	--	MPa	ASTM D790

121°C	21.0	--	MPa	ASTM D790
23°C	95.0	--	MPa	ISO 178
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength (23°C)	3.5	--	kJ/m²	ISO 179
Charpy Unnotched Impact Strength (23°C)	No Break	--		ISO 179
Notched Izod Impact				ASTM D256
-40°C	32	21	J/m	
23°C	48	170	J/m	
Drop Impact Resistance (23°C)	122	> 271	J	Internal Method
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Deflection Temperature Under Load				
0.45 MPa, Unannealed	190	--	°C	ASTM D648
1.8 MPa, Unannealed	75.0	--	°C	ASTM D648
1.8 MPa, Unannealed	65.0	--	°C	ISO 75-2/A
Peak Melting Temperature	220	--	°C	ASTM D3418, ISO 3146
CLTE - Flow	8.1E-5	--	cm/cm/°C	ASTM E831
RTI Elec				UL 746
0.710 mm	130	--	°C	
1.50 mm	130	--	°C	
3.00 mm	130	--	°C	
6.00 mm	130	--	°C	
RTI Imp				UL 746
0.710 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	
1.50 mm	105	--	°C	
3.00 mm	105	--	°C	
6.00 mm	105	--	°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
Dielectric Strength [1] (1.50 mm)	30	--	kV/mm	ASTM D149
Comparative Tracking Index	600	--	V	IEC 60112
Flammability	**Dry**	**Conditioned**	**Unit**	**Test Method**

Flame Rating			UL 94
0.710 mm	V-2	--	
1.50 mm	V-2	--	
3.00 mm	V-2	--	
6.00 mm	V-2	--	

Injection	Dry	Unit
Drying Temperature	80.0	°C
Drying Time	2.0 to 4.0	hr
Suggested Max Moisture	0.15	%
Processing (Melt) Temp	240 to 285	°C
Mold Temperature	65.0 to 80.0	°C
Injection Pressure	3.50 to 12.5	MPa
Injection Rate	Fast	

NOTE	
1.	Method A (Short-Time)

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China