Miramid® VE40C

Polyamide 6

BASF Leuna GmbH

Message:

Miramid® VE40C is a Polyamide 6 (Nylon 6) material filled with 40% glass fiber. It is available in Europe for injection molding.
Important attributes of Miramid® VE40C are:
Flame Rated
Chemical Resistant
Crystalline
Fast Molding Cycle
Good Stiffness
Typical applications include:
Engineering/Industrial Parts
Automotive
Construction Applications
Electrical/Electronic Applications
Sporting Goods

General Information	
Filler / Reinforcement	Glass Fiber,40% Filler by Weight
Additive	Mold Release
Features	Crystalline Fast Molding Cycle Fuel Resistant Good Flow Good Stability Good Stiffness Grease Resistant High Rigidity Oil Resistant Solvent Resistant
Uses	Automotive Applications Building Materials Electrical/Electronic Applications Engineering Parts Machine/Mechanical Parts Sporting Goods
Forms	Granules
Processing Method	Injection Molding
Multi-Point Data	Isothermal Stress vs. Strain (ISO 11403-1) Secant Modulus vs. Strain (ISO 11403-1) Shear Modulus vs. Temperature (ISO 11403-1)

Physical	Dry	Conditioned	Unit	Test Method
Density	1450	--	kg/m³	ISO 1183 [1]
Water Absorption				ISO 62 [2]
Saturation	5.3	--	%	
Equilibrium	1.4	--	%	
Viscosity number	145	--	cm³/g	ISO 307, 1157, 1628 [3]
Hardness	**Dry**	**Conditioned**	**Unit**	**Test Method**
Ball Indentation Hardness	250	--	MPa	ISO 2039-1
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile modulus	12000	8000	MPa	ISO 527-2 [4]
Tensile Stress (Break)	195	130	MPa	ISO 527-2 [5]
Tensile Strain (Break)	3.0	5.0	%	ISO 527-2 [6]
Flexural Stress [7]	300	180	MPa	ISO 178
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy notched impact strength				ISO 179/1eA [8]
-30°C	12.0	--	kJ/m²	
23°C	14.0	23.0	kJ/m²	
Charpy impact strength				ISO 179/1eU [9]
-30°C	65.0	--	kJ/m²	
23°C	95.0	105	kJ/m²	
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Deflection Temperature Under Load				ISO 75-2 [10]
0.45 MPa	215	--	°C	
1.8 MPa	210	--	°C	
Continuous Use Temperature				ISO 2578
-- [11]	115	--	°C	
-- [12]	130	--	°C	
-- [13]	180	--	°C	
Melting Temperature (DSC)	220	--	°C	ISO 3146
Electrical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Volume resistivity	1.0E+13	1.0E+10	ohms·m	IEC 60093 [14]
Dielectric Constant (1 MHz)	3.90	6.00		IEC 60250
Dissipation Factor (1 MHz)	0.015	0.15		IEC 60250 [15]
Comparative tracking index	550	--		IEC 60112 [16]
Flammability	**Dry**	**Conditioned**	**Unit**	**Test Method**
Burning Rate (1.00 mm)	< 100	--	mm/min	FMVSS 302
Flame Rating (1.50 mm)	HB	--		UL 94
Burning Behav. at thickness h (1.50 mm)	HB	--		ISO 1210 [17]

Glow Wire Flammability Index (1.00 mm)	650	--	°C	IEC 60695-2-12
Injection	Dry	Unit		
Processing (Melt) Temp	260 to 290		°C	
Mold Temperature	80.0 to 120		°C	
NOTE				
1.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.			
2.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.			
3.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.			
4.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.			
5.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.			
6.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.			
7.	Typical values for uncoloured product at 23°C and 50% relative humidity			
8.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.			
9.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.			
10.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.			
11.	Temperature index at loss of 50% tensile strength, 20000h			
12.	Temperature index at loss of 50% tensile strength, 5000h			
13.	Short time			
14.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.			
15.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.			
16.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.			

17.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.

Recommended distributors for this material

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