

Miramid® VX30CF

Polyamide 6

BASF Leuna GmbH

Message:

Miramid® VX30CF is a Polyamide 6 (Nylon 6) material filled with 30% glass fiber. It is available in Europe for injection molding.

Important attributes of Miramid® VX30CF are:

Flame Rated

Chemical Resistant

Flame Retardant

Crystalline

Good Stiffness

Typical applications include:

Electrical/Electronic Applications

Engineering/Industrial Parts

General Information				
Filler / Reinforcement		Glass Fiber,30% Filler by Weight		
Additive		Flame Retardant		
		Mold Release		
Features		Crystalline		
		Flame Retardant		
		Fuel Resistant		
		Good Electrical Properties		
		Good Flow		
		Good Stiffness		
		Grease Resistant		
		Oil Resistant		
		Solvent Resistant		
Uses		Electrical Parts		
		Electrical/Electronic Applications		
		Engineering Parts		
		Plugs		
		Switches		
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	1480	--	kg/m ³	ISO 1183 ¹
Water Absorption				ISO 62 ²
Saturation	4.8	--	%	
Equilibrium	1.3	--	%	
Viscosity number	145	--	cm ³ /g	ISO 307, 1157, 1628 ³
Hardness	Dry	Conditioned	Unit	Test Method
Ball Indentation Hardness	260	--	MPa	ISO 2039-1
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile modulus	12000	7900	MPa	ISO 527-2 ⁴
Tensile Stress (Break)	120	75.0	MPa	ISO 527-2 ⁵
Tensile Strain (Break)	2.0	2.0	%	ISO 527-2 ⁶
Flexural Stress ⁷	150	100	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy notched impact strength				ISO 179/1eA ⁸
-30°C	6.00	--	kJ/m ²	
23°C	8.00	9.00	kJ/m ²	
Charpy impact strength				ISO 179/1eU ⁹
-30°C	30.0	--	kJ/m ²	
23°C	30.0	50.0	kJ/m ²	
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				ISO 75-2 ¹⁰
0.45 MPa	215	--	°C	
1.8 MPa	205	--	°C	
Continuous Use Temperature				ISO 2578
-- ¹¹	110	--	°C	
-- ¹²	120	--	°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)	3.70	7.00		IEC 60250
Dissipation Factor (1 MHz)	0.018	0.30		IEC 60250 ¹⁵
Comparative tracking index	600	--		IEC 60112 ¹⁶
Flammability	Dry	Conditioned	Unit	Test Method
Burning Rate (1.00 mm)	< 100	--	mm/min	FMVSS 302
Flame Rating (1.50 mm)	V-2	--		UL 94
Burning Behav. at thickness h (1.50 mm)	V-2	--		ISO 1210 ¹⁷
Glow Wire Flammability Index (1.00 mm)	960	--	°C	IEC 60695-2-12
Injection	Dry	Unit		

Processing (Melt) Temp	240 to 270	°C
Mold Temperature	80.0 to 100	°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.	
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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.	

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