

Miramid® S3CW

Polyamide 66

BASF Leuna GmbH

Message:

Miramid® S3CW is a Polyamide 66 (Nylon 66) material. It is available in Europe for injection molding.

Important attributes of Miramid® S3CW are:

Flame Rated

Chemical Resistant

Good Mold Release

Heat Resistant

Typical application of Miramid® S3CW: Engineering/Industrial Parts

General Information				
Features		Fuel Resistant		
		Good Flow		
		Good Mold Release		
		Grease Resistant		
		High Heat Resistance		
		Oil Resistant		
		Solvent Resistant		
Uses		Engineering Parts		
Forms		Granules		
Processing Method		Injection Molding		
Physical	Dry	Conditioned	Unit	Test Method
Density	1130	--	kg/m³	ISO 1183 ¹
Water Absorption				ISO 62 ²
Saturation	8.0	--	%	
Equilibrium	2.5	--	%	
Viscosity number	145	--	cm³/g	ISO 307, 1157, 1628 ³
Hardness	Dry	Conditioned	Unit	Test Method
Ball Indentation Hardness	160	--	MPa	ISO 2039-1
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile modulus	3000	1800	MPa	ISO 527-2 ⁴
Tensile Stress (Yield)	80.0	60.0	MPa	ISO 527-2 ⁵
Tensile Strain (Yield)	5.0	20	%	ISO 527-2 ⁶
Flexural Stress ⁷ (3.5% Strain)	90.0	50.0	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy notched impact strength				ISO 179/1eA ⁸
-30°C	3.00	--	kJ/m²	
23°C	4.00	20.0	kJ/m²	

Charpy impact strength				ISO 179/1eU ⁹
-30°C	No Break	--		
23°C	No Break	No Break		
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				ISO 75-2 ¹⁰
0.45 MPa	200	--	°C	
1.8 MPa	70.0	--	°C	
Continuous Use Temperature				ISO 2578
-- ¹¹	110	--	°C	
-- ¹²	120	--	°C	
-- ¹³	200	--	°C	
Melting Temperature (DSC)	260	--	°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)	3.40	5.00		IEC 60250
Dissipation Factor (1 MHz)	0.025	0.20		IEC 60250 ¹⁵
Comparative tracking index	500	--		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)	850	--	°C	IEC 60695-2-12
Injection	Dry	Unit		
Processing (Melt) Temp	280 to 300		°C	
Mold Temperature	70.0 to 80.0		°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.

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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



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