

Miramid® H3C

Polyamide 6

BASF Leuna GmbH

Message:

Miramid® H3C is a Polyamide 6 (Nylon 6) material. It is available in Europe for injection molding.

Important attributes of Miramid® H3C are:

Flame Rated

Chemical Resistant

Good Mold Release

Mold Release Agent

Typical applications include:

Engineering/Industrial Parts

Automotive

General Information				
Additive	Mold Release			
Features	Fuel Resistant			
	Good Flow			
	Good Mold Release			
	Grease Resistant			
	Oil Resistant			
	Solvent Resistant			
Uses	Engineering Parts			
	Thick-walled Parts			
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	1130	--	kg/m ³	ISO 1183 ¹
Water Absorption				ISO 62 ²
Saturation	10	--	%	
Equilibrium	2.5	--	%	
Viscosity number	145	--	cm ³ /g	ISO 307, 1157, 1628 ³
Hardness	Dry	Conditioned	Unit	Test Method
Ball Indentation Hardness	150	--	MPa	ISO 2039-1
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile modulus	2800	1100	MPa	ISO 527-2 ⁴
Tensile Stress (Yield)	80.0	45.0	MPa	ISO 527-2 ⁵

Tensile Strain (Yield)	5.0	20	%	ISO 527-2 ⁶
Flexural Stress ⁷ (3.5% Strain)	90.0	25.0	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy notched impact strength				ISO 179/1eA ⁸
-30°C	5.00	--	kJ/m ²	
23°C	5.50	30.0	kJ/m ²	
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	190	--	°C	
1.8 MPa	65.0	--	°C	
Continuous Use Temperature				ISO 2578
-- ¹¹	70.0	--	°C	
-- ¹²	85.0	--	°C	
-- ¹³	160	--	°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)	3.40	6.00		IEC 60250
Dissipation Factor (1 MHz)	0.015	0.25		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)	850	--	°C	IEC 60695-2-12
Injection	Dry	Unit		
Processing (Melt) Temp	240 to 270		°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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