

Dyflor EE

Polyvinylidene Fluoride

Evonik Industries AG

Message:

Dyflor EE is a Polyvinylidene Fluoride (PVDF) material. It is available in Europe or North America for extrusion or injection molding.

Important attributes of Dyflor EE are:

Flame Retardant

Good UV Resistance

Heat Resistant

General Information			
Features	Flame Retardant		
	Good UV Resistance		
	High Heat Resistance		
Forms	Pellets		
Processing Method	Extrusion		
	Injection Molding		
Multi-Point Data	Creep Modulus vs. Time (ISO 11403-1)		
	Isochronous Stress vs. Strain (ISO 11403-1)		
Physical	Nominal Value	Unit	Test Method
Density	1780	kg/m ³	ISO 1183 ¹
Melt volume-flow rate (230°C/5.0 kg)	9.00	cm ³ /10min	ISO 1133 ²
Molding Shrinkage			ISO 2577 ³
Flow	2.6	%	
Across Flow	2.2	%	
Water Absorption (Saturation)	0.040	%	ISO 62 ⁴
Mechanical	Nominal Value	Unit	Test Method
Tensile modulus	1740	MPa	ISO 527-2 ⁵
Tensile Stress (Yield)	52.0	MPa	ISO 527-2 ⁶
Tensile Strain (Yield)	9.0	%	ISO 527-2 ⁷
Nominal strain at break	> 50	%	ISO 527-2 ⁸
Tensile Creep Modulus			ISO 899-1 ⁹
1 hr	1500	MPa	
1000 hr	850	MPa	
Impact	Nominal Value	Unit	Test Method
Charpy notched impact strength			ISO 179/1eA ¹⁰
-30°C	9.00	kJ/m ²	
23°C	17.0	kJ/m ²	

Charpy impact strength			ISO 179/1eU ¹¹
-30°C	220	kJ/m ²	
23°C	280	kJ/m ²	
Tensile notched impact strength (23°C)	160	kJ/m ²	ISO 8256/1 ¹²
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ISO 75-2 ¹³
0.45 MPa	130	°C	
1.8 MPa	70.0	°C	
Vicat Softening Temperature (50°C/h, B (50N))	136	°C	ISO 306 ¹⁴
Melting Temperature ¹⁵	170	°C	ISO 11357-3 ¹⁶
CLTE			ISO 11359-2 ¹⁷
Flow	1.3E-4	cm/cm/°C	
Transverse	1.3E-4	cm/cm/°C	
Electrical	Nominal Value	Unit	Test Method
Surface resistivity	1.3E+12	ohms	IEC 60093 ¹⁸
Volume resistivity	1.3E+12	ohms · m	IEC 60093 ¹⁹
Electric strength	21	kV/mm	IEC 60243-1 ²⁰
Relative Permittivity			IEC 60250 ²¹
100 Hz	9.90		
1 MHz	6.30		
Dissipation Factor			IEC 60250 ²²
100 Hz	0.030		
1 MHz	0.28		
Comparative tracking index	600		IEC 60112 ²³
Flammability	Nominal Value	Unit	Test Method
Burning Behav. at 1.6mm nom. thickn. (1.50 mm)	V-0		ISO 1210 ²⁴
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.		
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10.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
11.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
12.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
13.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
14.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
15.	10 °C/min
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.
18.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
19.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
20.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
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22.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
23.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
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