Solef® PVDF AM Filament MSC NT 1

Solvay Specialty Polymers - Polyvinylidene Fluoride

Thursday, October 17, 2019

General Information

Product Description

Solef® PVDF AM Filament MSC NT 1 provides long term performance up to 120°C, including exceptional chemical resistance and outstanding UV, weathering and oxidation resistance. The product is also intrinsically endowed of a very high purity. These features make it particularly suited for outdoor applications, and applications in contact with harsh chamical environments, such as Chemical Processing Industry, Semiconductor Industry and Oil&Gas.

General

Generic Name	• Polyvinylidene Fluoride (PVDF)		
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Chemical Resistant • Flame Retardant	• High Purity • Oxidation Resistant	• UV Resistant • Weather Resistant
Uses	• Additive Manufacturing (3D Printing) • Industrial Applications	• Oil/Gas Applications • Plumbing Parts	
RoHS Compliance	• Contact Manufacturer		
Appearance	• White		
Forms	• Filament		
Processing Method	• 3D Printing, Fused Filament Fabrication (FFF)		

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density - Specific Gravity [2]	1.72	g/cm³	ASTM D792
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus [3]	800	MPa	ASTM D638
Tensile Strength [3] (Yield)	30.0	MPa	ASTM D638
Tensile Strength [3] (Break)	25.0	MPa	ASTM D638
Tensile Elongation [3] (Yield)	10	%	ASTM D638
Tensile Elongation [3] (Break)	50 to 250	%	ASTM D638
Impact	**Nominal Value**	**Unit**	
Charpy Notched Impact Strength	6.00	kJ/m²	
Thermal	**Nominal Value**	**Unit**	**Test Method**
Melting Temperature	148	°C	ASTM D3418
Additional Information	**Nominal Value**	**Unit**	
Diameter - Filament	2.85	mm	

Printing conditions for above data table:

- Filament drying conditions: drying not needed
- Extruder temperature: 225 - 235°C
- Bed temperature: 100°C
- Printing tool path: cross hatching in the XY plane

Test specimen parameters:

- Layer thickness: 0.2 mm
- 100% infill
- 3 shells
- Printing speed: 25 mm/s

Notes

[1] Typical properties: these are not to be construed as specifications.

[2] On 3D printed specimens

[3] On 3D printed specimens, x-direction