

# Solef® 6010

## polyvinylidene fluoride

Solef® 6010 PVDF homopolymer has medium viscosity and is typically processed by extrusion.

### General

Material Status	• Commercial: Active	
Availability	• Africa & Middle East • Asia Pacific • Europe	• Latin America • North America
Features	• Homopolymer	• Medium Viscosity
Processing Method	• Extrusion	

Physical	Typical Value	Unit	Test method
Specific Gravity	1.75 to 1.80		ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/5.0 kg)	4.0 to 8.0	g/10 min	ASTM D1238
Molding Shrinkage - Flow	2.0 to 3.0	%	
Water Absorption (23°C, 24 hr)	< 0.040	%	ASTM D570

Mechanical	Typical Value	Unit	Test method
Tensile Modulus <sup>1</sup> (23°C, 2.00 mm)	1700 to 2500	MPa	ASTM D638
Tensile Strength <sup>2</sup>			ASTM D638
Yield, 23°C, 2.00 mm	50.0 to 60.0	MPa	
Break, 23°C, 2.00 mm	30.0 to 50.0	MPa	
Tensile Elongation <sup>2</sup>			ASTM D638
Yield, 23°C, 2.00 mm	5.0 to 10	%	
Break, 23°C, 2.00 mm	20 to 300	%	
Coefficient of Friction			ASTM D1894
vs. Itself - Dynamic	0.15 to 0.35		
vs. Itself - Static	0.20 to 0.40		
Taber Abrasion Resistance			ASTM D4060
1000 Cycles, 1000 g, CS-10 Wheel	5.00 to 10.0	mg	

Impact	Typical Value	Unit	Test method
Charpy Notched Impact Strength <sup>3</sup>			ASTM D6110
23°C, 4.00 mm	100 to 200	J/m	

Hardness	Typical Value	Unit	Test method
Durometer Hardness (Shore D, 1 sec, 2.00 mm)	73 to 80		ASTM D2240

Thermal	Typical Value	Unit	Test method
Glass Transition Temperature	-40.0	°C	ASTM D4065
Vicat Softening Temperature	135 to 145	°C	ASTM D1525 <sup>4</sup>
Melting Temperature	170 to 175	°C	ASTM D3418
Peak Crystallization Temperature (DSC)	137 to 144	°C	ASTM D3418
CLTE - Flow (0 to 40°C)	1.4E-4	cm/cm/°C	ASTM D696

# Solef® 6010

polyvinylidene fluoride

Thermal	Typical Value Unit	Test method
Specific Heat		ASTM E968
23°C	1200 J/kg/°C	
100°C	1600 J/kg/°C	
Thermal Conductivity (23°C)	0.20 W/m/K	ASTM C177
Crystallization Heat	54.0 to 60.0 J/g	ASTM D3417
Heat of Fusion	57.0 to 66.0 J/g	ASTM D3417
Electrical	Typical Value Unit	Test method
Surface Resistivity	> 1.0E+14 ohms	ASTM D257
Volume Resistivity	> 1.0E+14 ohms·cm	ASTM D257
Dielectric Strength (23°C, 1.00 mm)	20 to 25 kV/mm	ASTM D149
Dielectric Constant (23°C, 1 kHz)	7.00 to 10.0	ASTM D150
Flammability	Typical Value Unit	Test method
Flame Rating (0.100 mm)	V-0	UL 94
Oxygen Index (3.00 mm)	44 %	ASTM D2863

## Notes

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

<sup>1</sup> Type IV, 1.0 mm/min

<sup>2</sup> Type IV, 50 mm/min

<sup>3</sup> 2 m/s

<sup>4</sup> Rate A (50°C/h), Loading 2 (50 N)

[www.solvay.com](http://www.solvay.com)

[SpecialtyPolymers.EMEA@solvay.com](mailto:SpecialtyPolymers.EMEA@solvay.com) | Europe, Middle East and Africa

[SpecialtyPolymers.Americas@solvay.com](mailto:SpecialtyPolymers.Americas@solvay.com) | Americas

[SpecialtyPolymers.Asia@solvay.com](mailto:SpecialtyPolymers.Asia@solvay.com) | Asia and Australia

Safety Data Sheets (SDS) are available by emailing us or contacting your sales representative. Always consult the appropriate SDS before using any of our products.

Neither Solvay Specialty Polymers nor any of its affiliates makes any warranty, express or implied, including merchantability or fitness for use, or accepts any liability in connection with this product, related information or its use. Some applications of which Solvay's products may be proposed to be used are regulated or restricted by applicable laws and regulations or by national or international standards and in some cases by Solvay's recommendation, including applications of food/feed, water treatment, medical, pharmaceuticals, and personal care. Only products designated as part of the Solviva® family of biomaterials may be considered as candidates for use in implantable medical devices. The user alone must finally determine suitability of any information or products for any contemplated use in compliance with applicable law, the manner of use and whether any patents are infringed. The information and the products are for use by technically skilled persons at their own discretion and risk and does not relate to the use of this product in combination with any other substance or any other process. This is not a license under any patent or other proprietary right.

All trademarks and registered trademarks are property of the companies that comprise the Solvay Group or their respective owners.

© 2017 Solvay Specialty Polymers. All rights reserved.