Versaflex™ OM 6050X-1

Thermoplastic Elastomer

Key Characteristics

Product Description

Versaflex™ OM 6050X-1 is designed for two-shot or insert overmolding onto nylon 6/6 and nylon 6 substrates.
New Product. Commercial specifications have not been established.

- Excellent Bond to Nylon 6, Nylon 6/6
- Rubbery Feel
- Soft Touch

General			
Material Status	• Obsolete		
Regional Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Agency Ratings	• UL 94 .QMFZ2.E76261		
Appearance	• Natural Color		
Processing Method	• Injection Molding		

Technical Properties [1]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Specific Gravity	1.17	1.17	ASTM D792
Melt Mass-Flow Rate (MFR)			ASTM D1238
190°C/2.16 kg	3.0 g/10 min	3.0 g/10 min	
200°C/5.0 kg	42 g/10 min	42 g/10 min	
Molding Shrinkage - Flow	7.0E-3 to 0.011 in/in	0.70 to 1.1 %	ASTM D955
Elastomers	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Stress [2, 3] (100% Strain, 73°F (23°C))	300 psi	2.07 MPa	ASTM D412
Tensile Stress [2, 3] (300% Strain, 73°F (23°C))	570 psi	3.93 MPa	ASTM D412
Tensile Strength [2, 3] (Yield, 73°F (23°C))	650 psi	4.48 MPa	ASTM D412
Tensile Elongation [2, 3] (Break, 73°F (23°C))	390 %	390 %	ASTM D412
Tear Strength	110 lbf/in	19.3 kN/m	ASTM D624
Compression Set (73°F (23°C), 22 hr)	44 %	44 %	ASTM D395B
Hardness	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Durometer Hardness (Shore A, 10 sec)	50	50	ASTM D2240

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Drying Temperature	130 to 140 °F	54.4 to 60.0 °C
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr
Suggested Max Moisture	0.10 %	0.10 %
Suggested Max Regrind	20 %	20 %
Rear Temperature	350 to 420 °F	177 to 216 °C
Middle Temperature	400 to 470 °F	204 to 243 °C
Front Temperature	410 to 480 °F	210 to 249 °C
Nozzle Temperature	420 to 490 °F	216 to 254 °C
Processing (Melt) Temp	440 to 500 °F	227 to 260 °C

Injection	Typical Value (English)	Typical Value (SI)
Mold Temperature	70.0 to 90.0 °F	21.1 to 32.2 °C
Back Pressure	75.0 to 175 psi	0.517 to 1.21 MPa
Screw Speed	75 to 125 rpm	75 to 125 rpm

Injection Notes

Versaflex™ OM 6050X-1 should use color concentrates with LDPE as a carrier. Typical letdown ratios are 50:1 to 25:1 - loading levels should be as low as possible to minimize the effect of adhesion. A high color match consistency can be obtained by the use of precolored compounds available from GLS. Polypropylene (PP) based color concentrates are not recommended because they can significantly affect adhesion of the TPE to the nylon. Concentrates based on PVC should not be used. The final determination of color concentrate suitability should be determined by customer trials.

Purge thoroughly before and after use of this product with a low flow (0.5 - 2.5 MFR) polyethylene (PE) or polypropylene (PP).

Versaflex™ OM 6050X-1 can use regrind up to 20% with minimal property loss, provided that the regrind is free of contamination. To minimize losses during molding, the melt temperature should remain as low as possible. The final determination of regrind effectiveness should be determined by the customer.

The Versaflex™ OM 6050X-1 has good melt stability. Maximum residence times may vary, depending on the size of the barrel. Generally, the barrel should be emptied if it is idle for periods of 8 - 10 minutes or longer.

Suggested Dewpoint: -40°F

Injection Speed: 1 to 5 in/sec
1st Stage - Boost Pressure: 200 to 600 psi
2nd Stage - Hold Pressure: 70% of Boost
Hold Time (Thick Part): 4 to 10 sec
Hold Time (Thin Part): 1 to 3 sec

Notes

[1] Typical values are not to be construed as specifications.

[2] Die C

[3] 2 hr

CONTACT INFORMATION

Americas

United States - Avon Lake
+1 440 930 1000

United States - McHenry
+1 815 385 8500

Asia

China - Guangzhou
+86 20 8732 7260

China - Shenzhen
+86 755 2969 2888

China - Suzhou
+86 512 6823 24 38

China - Suzhou
+86 512 6265 2600

Hong Kong -
+852 2690 5332

Taiwan - Yonghe City,
+886 9396 99740, +886 2929 1849

Europe

Germany - Gaggenau
+49 7225 6802 0

Spain - Barbastro (Huesca)
+34 974 310 314

Beyond Polymers.

Better Business Solutions. SM

www.polyone.com

PolyOne Americas
33587 Walker Road
Avon Lake, Ohio 44012
United States
+1 440 930 1000
+1 866 POLYONE

PolyOne Asia
No. 88 Guoshoujing Road
Z.J Hi-tech Park, Pudong
Shanghai, 201203, China
+86 21 5080 1188

PolyOne Europe
6 Giällewee
+352 269 050 35