Versaflex™ LC AB3-081

Thermoplastic Elastomer

Key Characteristics

Product Description

Versaflex™ CL30 EU is an easy processing compound designed for use in injection molding and exrusion applications where water-clarity and excellent colorability are required.

- Excellent Clarity
- Excellent Colorability
- Overmold Adhesion to Polypropylene
- Soft Touch

General			
Material Status	• Commercial: Active		
Regional Availability	• Africa & Middle East • Asia Pacific	• Latin America • North America	
Features	• Good Colorability	• High Clarity	
Uses	• Consumer Applications • Flexible Grips	• Optical Applications • Overmolding	• Soft Touch Applications • Transparent or Translucent Parts
Agency Ratings	• FDA		
RoHS Compliance	• RoHS Compliant		
Appearance	• Clear/Transparent		
Forms	• Pellets		
Processing Method	• Injection Molding		

Technical Properties [1]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	0.890	0.890	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/5.0 kg)	> 50 g/10 min	> 50 g/10 min	ISO 1133
Molding Shrinkage - Flow	0.021 to 0.025 in/in	2.1 to 2.5 %	ISO 294-4
Elastomers	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Stress [2]			ISO 37
100% Strain, 73°F (23°C), 0.0787 in (2.00 mm)	87.0 psi	0.600 MPa	
Tensile Stress [2]			ISO 37
300% Strain, 73°F (23°C), 0.0787 in (2.00 mm)	189 psi	1.30 MPa	
Tensile Strength [2]			ISO 37
Break, 73°F (23°C), 0.0787 in (2.00 mm)	754 psi	5.20 MPa	
Tensile Elongation [2]			ISO 37
Break, 73°F (23°C), 0.0787 in (2.00 mm)	800 %	800 %	
Tear Strength [3]			ISO 34-1
73°F (23°C), 0.0787 in (2.00 mm)	110 lbf/in	19.3 kN/m	
Compression Set (73°F (23°C), 22 hr)	11 %	11 %	ISO 815
Hardness	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Shore Hardness (Shore A, 10 sec)	30	30	ISO 48-4

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Fill Analysis	Typical Value (English)	Typical Value (SI)	Test Method
Apparent Viscosity			ISO 11443
392°F (200°C), 11200 sec^-1	14.8 Pa·s	14.8 Pa·s	

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Suggested Max Regrind	20 %	20 %
Rear Temperature	320 to 365 °F	160 to 185 °C
Middle Temperature	347 to 392 °F	175 to 200 °C
Front Temperature	356 to 437 °F	180 to 225 °C
Nozzle Temperature	374 to 437 °F	190 to 225 °C
Mold Temperature	77 to 104 °F	25 to 40 °C
Back Pressure [4]	290 to 1450 psi	2.00 to 10.0 MPa
Screw Speed	75 to 125 rpm	75 to 125 rpm

Injection Notes

Color concentrates with polypropylene (PP), ethylene vinyl acetate (EVA), or polyethylene (PE) carriers are most suitable for coloring Versaflex™ CL30 EU. Improved color dispersion can be achieved by using higher melt flow concentrates (with a melt flow from 25 - 40 g/10 min). Typical loadings for color concentrates are 1% to 5% by weight. Liquid color can be used, but mineral oil based carriers may have a significant effect on the final hardness value. Concentrates based on PVC should not be used. A high color match consistency can be obtained by using precolored compounds available from GLS. 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).

Regrind levels up to 20% can be used with Versaflex™ CL30 EU 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.

Drying is not Required

Injection Speed: 1 to 5 in/sec
1st Stage - Boost Pressure: 400 to 1000 psi
2nd Stage - Hold Pressure: 30% of Boost
Hold Time (Thick Part): 3 to 10 sec
Hold Time (Thin Part): 1 to 3 sec

Notes

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

[2] 7.9 in/min (200 mm/min)

[3] 20 in/min (500 mm/min)

[4] if color masterbatches are used, higher back pressure are necessary.

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