Versaflex™ CL E85

Thermoplastic Elastomer

Key Characteristics

Product Description

Versaflex™ CL E85 is an exceptional clarity, high performance and autoclavable solution ideal for healthcare and food packaging. Versaflex™ CL E85 is also formulated without the use of plasticizers.
New Product. Commercial specifications have not been established.

- Flexible
- Formulated without Plasticizers
- High Clarity
- Stable under Radiation and Autoclave Sterilization

General

Material Status	• Commercial: Active		
Regional Availability	• Africa & Middle East • Asia Pacific	• Europe • North America	• South America
Features	• Autoclave Sterilizable • Good Flexibility	• High Clarity • Radiation Sterilizable	
Uses	• Bottles • Film	• Medical/Healthcare Applications • Personal Care	
Agency Ratings	• FDA 21 CFR 177.1210 [1] • ISO 10993 Part 4	• ISO 10993 Part 5 • USP Class VI	
RoHS Compliance	• RoHS Compliant		
Appearance	• Clear/Transparent		
Forms	• Pellets		
Processing Method	• Extrusion		

Technical Properties [2]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Specific Gravity	0.890	0.888 g/cm³	ASTM D792
Films	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Oxygen Permeability			ASTM D3985
70°F (21°C), 73 mil (1800 µm)	970 cm³·mil/100in²/atm/24 hr	380 cm³·mm/m²/atm/24 hr	
Oxygen Transmission Rate			ASTM D3985
70°F (21°C), 73 mil (1800 µm)	210 cm³/100 in²/24 hr	3200 cm³/m²/24 hr	
Elastomers	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Stress [3, 4]			ASTM D412
100% Strain, 73°F (23°C)	606 psi	4.18 MPa	
300% Strain, 73°F (23°C)	885 psi	6.10 MPa	
Tensile Strength [3, 4] (Break, 73°F (23°C))	1600 psi	11.0 MPa	ASTM D412
Tensile Elongation [3, 4] (Break, 73°F (23°C))	610 %	610 %	ASTM D412
Compression Set			ASTM D395B
72°F (22°C), 22.0 hr	20 %	20 %	
113°F (45°C), 22.0 hr	51 %	51 %	
158°F (70°C), 22.0 hr	67 %	67 %	
212°F (100°C), 22.0 hr	72 %	72 %	

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Hardness	Typical Value (English)	Typical Value (SI)	Test Method
Durometer Hardness (Shore A, 10 sec)	84	84	ASTM D2240
Fill Analysis	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Apparent Viscosity			ASTM D3835
392°F (200°C), 1340 sec^-1	172 Pa·s	172 Pa·s	
392°F (200°C), 11200 sec^-1	36.0 Pa·s	36.0 Pa·s	

Processing Information

Extrusion	Typical Value (English)	Typical Value (SI)
Melt Temperature	360 to 400 °F	182 to 204 °C
Die Temperature	340 to 390 °F	171 to 199 °C

Extrusion Notes

Color concentrates with polypropylene (PP), ethylene vinyl acetate (EVA), or low density polyethylene (PE) carriers are most suitable for coloring Versaflex™ CL E85. Improved color dispersion can be achieved by using higher melt flow concentrates (with a melt flow from 25 - 40g/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).

Drying is not Required.

Rear Zone = 330-370F
Center Zone = 350-400F
Front Zone = 360-420F
Screw Speed = 100-500 RPM

Notes

[1] Please contact GLS Thermoplastic Elastomers for a copy of the FDA compliance letter.

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

[3] Die C

[4] 2 hr

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