

TECHNICAL DATA SHEET

[English Units]



TOPAS[®] ELASTOMER E-140

Cyclic Olefin Copolymer (COC)

Thermoplastic Polyolefin Elastomer with good transparency, excellent barrier properties and high purity.

Property	Value	Unit	Test Standard
Physical Properties			
Density	940	kg/m ³	ISO 1183
Melt flow rate (MFR) (260°C, 2.16kg)	11,0	g/10min	calculated
Melt flow rate (MFR) (190°C, 2.16kg)	2,7	g/10min	calculated
Mechanical Properties			
Tensile modulus (1mm/min)	10	Kpsi	ISO 527-2/1A
Tensile stress at break (50mm/min)	> 2800	psi	ISO 527-2/1A
Tensile strain at break (50mm/min)	> 500	%	ISO 527-2/1A
Tensile modulus (1mm/min) @ -50°C	250	Kpsi	ISO 527-2/1A
Tensile stress at break (50mm/min) @ -50°C	> 380	psi	ISO 527-2/1A
Tensile strain at break (50mm/min) @ -50°C	> 200	%	ISO 527-2/1A
Tear strength	270	lbf/in	ISO 34-1
Compression set - @72h / 23°C	32	%	ISO 815
Compression set - @24h / 60°C	90	%	ISO 815
Hardness, Shore A	89	-	ISO 868
Thermal Properties			
Tm - Melt temperature (10°C/min)	183	°F	ISO 11357
Vicat softening temperature A50 (50°C/h 10N)	147	°F	ISO 306
Barrier Properties			
Water vapor permeability @ 23°C, 85% RH	0,25	g×mil/100in ² ×day	ISO 15106-3
Water vapor permeability @ 38°C, 90% RH	1,2	g×mil/100in ² ×day	ISO 15106-3
Oxygen permeability @ 23°C, 50% RH	300	cm ³ ×mil/100in ² ×day	ASTM D3985

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