

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 volume rate (MVR) @ 260°C/2,16kg	12	cm ³ /10min	ISO 1133
Melt volume rate (MVR) @ 190°C/2,16kg	3	cm ³ /10min	ISO 1133
Mechanical Properties			
Tensile modulus (1mm/min)	50	MPa	ISO 527-2/1A
Tensile stress at break (50mm/min)	46	MPa	ISO 527-2/1A
Tensile strain at break (50mm/min)	> 500	%	ISO 527-2/1A
Tensile modulus (1mm/min) @ -50°C	1700,0	MPa	ISO 527-2/1A
Tensile stress at break (50mm/min) @ -50°C	26	MPa	ISO 527-2/1A
Tensile strain at break (50mm/min) @ -50°C	> 200	%	ISO 527-2/1A
Tear strength	47	kN/m	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)	84	°C	ISO 11357
Vicat softening temperature A50 (50°C/h 10N)	64	°C	ISO 306
Barrier Properties			
Water vapor permeability @ 23°C, 85% RH	1,0	g×100µm / m ² ×day	ISO 15106-3
Water vapor permeability @ 38°C, 90% RH	4,6	g×100µm / m ² ×day	ISO 15106-3
Oxygen permeability @ 23°C, 50% RH	1200	cm ³ ×100µm / m ² ×day×bar	ASTM D3985

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