

TOPAS® 9903D-10

Cyclic Olefin Copolymer (COC)

Extrusion grade with high rigidity and low glass transition temperature. For thermoforming, shrink film and seal layer formulations.

Property	Value	Unit	Test Standard
Physical Properties			
Density	980	kg/m ³	ISO 1183
Melt volume rate (MVR) (230°C, 2.16kg)	4	cm ³ /10min	ISO 1133
Melt volume rate (MVR) (190°C, 2.16kg)	1	cm ³ /10min	ISO 1133
Water absorption (23°C-sat)	0,01	%	ISO 62
Thermal Properties			
Glass transition temperature (10°C/min)	33	°C	ISO 11357-1,-2,-3
Mechanical Properties (Film)			
Tensile modulus (machine direction)	1200	Mpa	ISO 527-3
Tensile modulus (transverse direction)	1200	Mpa	ISO 527-3
Tensile strength @ break (machine direction)	25	Mpa	ISO 527-3
Tensile strength @ break (transverse direction)	22	Mpa	ISO 527-3
Elongation at break (machine direction)	>150	%	ISO 527-3
Elongation at break (transverse direction)	>110	%	ISO 527-3
Barrier Properties (Film)			
Water vapor permeability @ 38°C, 90% RH	1,9	g×100µm / m ² ×day	ISO 15106-3
Test Specimen Production (Film)			
Type of extrusion	cast		
Thickness of specimen	0,10	mm	
Storage			
This grade tends to stick due to its low glass transition temperature. This is also true for parts made thereof. Chilled warehousing is recommended.			

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