



TOPAS® 7010F-600

Topas Advanced Polymers GmbH - Cyclic Olefin Copolymer

Sunday, November 3, 2019

General Information

Product Description

TOPAS 7010F-600 is a robust film extrusion grade designed for blending with polyethylene (PE). It is a moderate clarity amorphous resin with high stiffness, moisture barrier, chemical resistance, thermoformability and purity for food and general purpose applications. It is used in blends in both cast and blown processes, and in monolayer and multilayer products. Leading film applications include twist wrap, forming webs, protective packaging, shrink films and labels, and easy tear packaging. Industrial uses include formed PE and PP sheet products. For property enhancement at elevated temperatures, higher glass transition temperature (Tg) grades of TOPAS are recommended.

Selected Applications

- Forming films (header bags, etc.)
- Protective packaging
- Shrink films and labels
- Twist films
- Decorative sheet
- Food packaging
- Food contact

Leading Attributes

- Clarity, forming, barrier, purity, halogen-free
- Stiffness for downgauging, improved forming
- High shrink, low stress, gloss, toughness
- Outstanding deadfold, clean cutting
- Stiffness, chemical resistance, forming, even draw
- Not manufactured with BPA, phthalates, or halogens
- Broad regulatory approval

Related Grades for Packaging and Film Extrusion

- TOPAS 8007F-04 - ultimate clarity extrusion grade
- TOPAS 8007F-600 - robust clarity extrusion grade especially for PE blends

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Amorphous • BPA Free • Chemical Resistant • Copolymer • Food Contact Acceptable	• General Purpose • Good Toughness • Halogen Free • High Gloss • High Purity	• High Shrinkage • High Stiffness • Medium Clarity • Moisture Barrier
Uses	• Blending • Cast Film • Film	• Food Packaging • General Purpose • Labels	• Multilayer Film • Packaging • Sheet
Agency Ratings	• DMF 12132 • EU 10/2011	• FDA FCN 405 • ISO 10993	• USP Class VI
Forms	• Pellets		
Processing Method	• Blown Film • Cast Film	• Film Extrusion • Thermoforming	

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ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.02	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR)			Calculated
190°C/2.16 kg	0.70	g/10 min	
230°C/2.16 kg	9.0	g/10 min	
Melt Volume-Flow Rate (MVR)			ISO 1133
190°C/2.16 kg	0.800	cm ³ /10min	
230°C/2.16 kg	10	cm ³ /10min	
Water Absorption (Saturation, 73°F)	0.010	%	ISO 62
Films	Nominal Value	Unit	Test Method
Tensile Modulus			ISO 527-3
MD : 3.9 mil, Cast Film	320000	psi	
TD : 3.9 mil, Cast Film	300000	psi	
Tensile Stress			ISO 527-3
MD : Break, 3.9 mil, Cast Film	8700	psi	
TD : Break, 3.9 mil, Cast Film	8300	psi	
Tensile Elongation			ISO 527-3
MD : Break, 3.9 mil, Cast Film	3.6	%	
TD : Break, 3.9 mil, Cast Film	3.5	%	
Oxygen Permeability (73°F, 3.9 mil, Cast Film, 50% RH)	70	cm ³ ·mil/100in ² /atm/24 hr	ASTM D3985
Water Vapor Transmission Rate			ISO 15106-3
3.9 mil, 100°F, Cast Film, 90% RH	0.25	g·mil/100in ² /atm/24 hr	
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	230	°F	ISO 11357-2

Processing Information

Extrusion	Nominal Value	Unit
Extruder Feed Section	68 to 158	°F
Cylinder Zone 1 Temp.	410 to 446	°F
Cylinder Zone 2 Temp.	428 to 464	°F
Cylinder Zone 3 Temp.	428 to 464	°F
Cylinder Zone 4 Temp.	428 to 464	°F
Die Temperature	428 to 464	°F
Extruder Screw L/D Ratio	> 28:1	

Notes

¹ Typical properties: these are not to be construed as specifications.