TOPAS® 8007F-04

Cyclic Olefin Copolymer

Topas Advanced Polymers, Inc.

Message:

Product Description
TOPAS 8007F-04 is a general purpose film extrusion grade. It is a high clarity amorphous resin with high stiffness, moisture barrier, chemical resistance, thermoformability and purity for food and healthcare applications. It is used in monolayer cast applications, and in coextrusions in both cast and blown processes, for a wide variety of film and sheet products requiring excellent optics in applications such as blister, twist, barrier, shrink and easy tear packaging. Industrial uses include formed decorative sheet products. For property enhancement at elevated temperatures, higher glass transition temperature (Tg) grades of TOPAS are recommended.
Selected Applications
Pharmaceutical blisters
Deep draw barrier trays
Shrink films and labels
Twist films
Decorative sheet
Food packaging
Healthcare and food contact
Leading Attributes
Clarity, forming, barrier, purity, halogen-free
Excellent deep forming, unlike other barriers
High shrink, low stress, gloss, clarity, toughness
High gloss, outstanding deadfold, clean cutting
Gloss, hardness, chemical resistance, forming
Not manufactured with BPA, phthalates, or halogens
Broad regulatory compliance
Related Grades for Packaging and Film Extrusion
TOPAS 8007F-400 - robust extrusion grade especially for PE blends
TOPAS 8007F-600 - robust clarity extrusion grade especially for PE blends

General Information	
Features	High purity
	Moisture proof
	Rigidity, high
	Highlight
	Copolymer
	Good chemical resistance
	Definition, high
	Good toughness
	Compliance of Food Exposure
	General
	BPA-free
	amorphous
	Halogen-free
Uses	Packaging
	Films
	Label

	cast film
	Sheet
	Food packaging
	General
	Drug packaging
	Medical/nursing supplies
Agency Ratings	DMF 12132
	FDA FCN 405
	Europe 10/1/2011 12:00:00 AM
Forms	Particle
Processing Method	Film extrusion
	Blow film
	Co-extruded film
	cast film
	Thermoforming

Physical	Nominal Value	Unit	Test Method
Density	1.02	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR)			ISO 1133
190°C/2.16 kg	1.8	g/10 min	ISO 1133
230°C/2.16 kg	11	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR)			ISO 1133
190°C/2.16 kg	2.00	cm³/10min	ISO 1133
230°C/2.16 kg	12.0	cm³/10min	ISO 1133
Water Absorption (Saturation, 23°C)	0.010	%	ISO 62
Films	**Nominal Value**	**Unit**	**Test Method**
Film Thickness - Tested	70	µm	
Tensile Modulus			ISO 527-3/1
MD: 70 µm, cast film	2200	MPa	ISO 527-3/1
TD: 70 µm, cast film	1800	MPa	ISO 527-3/1
Tensile Stress			ISO 527-3/50
MD: Fracture, 70 µm, cast film	57.0	MPa	ISO 527-3/50
TD: Fracture, 70 µm, cast film	50.0	MPa	ISO 527-3/50
Tensile Elongation			ISO 527-3/50
MD: Fracture, 70 µm, cast film	2.9	%	ISO 527-3/50
TD: Fracture, 70 µm, cast film	3.0	%	ISO 527-3/50
Dart Drop Impact (70 µm, cast film)	< 36	g	ISO 7765-1
Elmendorf Tear Strength			ISO 6383-2
MD: 70 µm, cast film	2.2	N	ISO 6383-2
TD: 70 µm, cast film	2.3	N	ISO 6383-2

Oxygen Permeability (23°C, 70 μm, extruded film, 50% RH)	25	$cm^3 \cdot mm/m^2/atm/24\ hr$	ASTM D3985
Water Vapor Transmission Rate (70 μm, 23°C, Cast Film, 85% RH)	0.094	$g \cdot mm/m^2/atm/24\ hr$	ASTM F1249
Thermal	**Nominal Value**	**Unit**	**Test Method**
Glass Transition Temperature	78.0	°C	ISO 11357-2
Optical	**Nominal Value**	**Unit**	**Test Method**
Gloss (60, 70.0 μm, cast film)	> 100		ISO 2813
Haze (70.0 μm, cast film)	< 1.0	%	ISO 14782
Extrusion	**Nominal Value**	**Unit**	
Feed part of extruder	20 - 60	°C	
Extruder Screw L/D Ratio	> 28:1		
Cylinder Zone 1 Temp.	210 - 220	°C	
Cylinder Zone 2 Temp.	230 - 240	°C	
Cylinder Zone 3 Temp.	230 - 240	°C	
Cylinder Zone 4 Temp.	230 - 240	°C	
Die Temperature	230 - 240	°C	

Extrusion instructions

Head pressure: P > 140 bar / 2000 psi; Fine screen packs as neededScrew speed: RPM > 50% nominalScrew design:
Multi-purpose or barrier screw with mixing section
Screw diameter > 60 mm / 2.5 inch
Grooved Feed: Hot temperature: 120°C (248°F)

Recommended distributors for this material

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