HOSTAFORM® M25IE ECO-C 872

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Hostaform® M25IE ECO-C 872 is a special grade of acetal copolymer targeted for calendering.It provides sheets with a high gloss and smooth surface.
Chemical abbreviation according to ISO 1043-1: POM

Hostaform® M25IE ECO-C 872 incorporates a minimum of 85% circular content derived from captured carbon dioxide emissions by weight in the finished product through mass balance allocation. The product is a drop-in replacement to the standard grade with the same performance and processing properties and contributes to the displacement of virgin fossil fuel resources. The feedstock utilizing captured carbon dioxide emissions are ISCC CFC certified as low carbon intensity methanol.

Product information

Resin Identification	POM		ISO 1043
Part Marking Code	>POM<		ISO 11469

Rheological properties

Melt volume-flow rate	2.5	cm^3/10min	ISO 1133
Temperature	374	°F	
Load	4.76	lb	
Melt mass-flow rate	2.9	g/10min	ISO 1133
Melt mass-flow rate, Temperature	374	°F	
Melt mass-flow rate, Load	4.76	lb	

Typical mechanical properties

Tensile modulus	348000	psi	ISO 527-1/-2
Tensile stress at yield, 50mm/min	8800	psi	ISO 527-1/-2
Tensile strain at yield, 50mm/min	11	%	ISO 527-1/-2
Flexural modulus	348000	psi	ISO 178
Charpy impact strength, 23°C	119[P]	$ftlb/in^2$	ISO 179/1eU
Charpy impact strength, -30°C	119	$ftlb/in^2$	ISO 179/1eU
Charpy notched impact strength, 23°C	4.04	$ftlb/in^2$	ISO 179/1eA

[P]: Partial Break

Thermal properties

Melting temperature, 10°C/min	325	°F	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	196	°F	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	0.61	E-4/°F	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	0.556	E-4/°F	ISO 11359-1/-2

Physical/Other properties

Humidity absorption, 2mm	0.2	%	Sim. to ISO 62
Density	0.0509	lb/in^3	ISO 1183

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Injection

Drying Recommended	no	
Drying Temperature	212	°F
Drying Time, Dehumidified Dryer	3 - 4	h
Processing Moisture Content	≤0.2	%
Melt Temperature Optimum	392	°F
Min. melt temperature	374	°F
Max. melt temperature	410	°F
Max. screw tangential speed	≤0.3	m/s
Mold Temperature Optimum	212	°F
Min. mold temperature	176	°F
Max. mold temperature	248	°F
Hold pressure range	8700 - 17400	psi
Hold Pressure Time (h is the max. wall thickness of the part in mm)	$2h^2$-3	s
Back pressure	580	psi

Characteristics

Processing	Injection Molding, Extrusion, Sheet Extrusion, Other Extrusion, Calendering
Special characteristics	High viscosity
Sustainability	Carbon Capture

Additional information

Profile extrusion

Preprocessing

General drying is not necessary due to low moisture absorption of the resin.

In case of bad storage conditions (water contact or condensed water) the use of a recirculating air dryer (100 to 120 °C / max. 40 mm layer / 3 to 6 hours) is recommended.

Max. Water content 0,2 %

Processing

Standard extruders with grooved feed zone and short compression screws (minimum 25 D) will fit.

Melt temperature 180-190 °C

Postprocessing

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Conditioning e.g. moisturizing is not necessary.

In case of very thick wall thickness profiles after-annealing it is recommended to reduce internal stress.

Annealing temperature 130-140 °C
Annealing time 10 min/mm thickness

Sheet extrusion

Preprocessing

General drying is not necessary due to low moisture absorption of the resin.

In case of bad storage conditions (water contact or condensed water) the use of a recirculating air dryer (100 to 120 °C / max. 40 mm layer / 3 to 6 hours) is recommended.

Max. Water content 0,2 %

Processing

Standard extruders with grooved feed zone and short compression screws (minimum 25 D) will fit.

Melt temperature 180-190 °C

Postprocessing

Conditioning e.g. moisturizing is not necessary.

In case of very thick wall thickness profiles after-annealing it is recommended to reduce internal stress.

Annealing temperature 130-140 °C
Annealing time 10 min/mm thickness

Processing Notes

Pre-Drying

Drying is not normally required. If material has come in contact with moisture through improper storage or handling or through regrind use, drying may be necessary to prevent splay and odor problems.

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