

Technical Datasheet

DESCRIPTION

Clearblend® 165 is an impact modified styrene acrylic copolymer blend with excellent clarity and outstanding toughness.

FEATURES

- Exceptional toughness
- Low density
- Ease of processing
- Low moisture absorption

APPLICATIONS

- Appliances and consumer goods
- Medical devices
- Toys
- Office accessories
- Industrial housings and covers

Property, Test Condition	Standard	Unit	Values
Rheological Properties			
Melt Flow Rate, 200 °C/5 kg	ASTM D 1238	g/10 min	5
Mechanical Properties			
Izod Notched Impact Strength, 23°C (73°F)	ASTM D 256	ft-lb/in	5
Tensile Stress at Yield, 23° C	ASTM D 638	psi	3000
Tensile Modulus	ASTM D 638	psi x 10 ³	220
Elongation, Failure	ASTM D 638	%	50
Flexural Strength	ASTM D 790	psi	5400
Flexural Modulus	ASTM D 790	psi x 10 ³	225
Hardness, Rockwell	ASTM D 785	M scale	70
Thermal Properties			
Vicat Softening Temperature, B/1 (120°C/h, 10N)	ASTM D 1525	°F	201
Optical Properties			
Refractive Index, Sodium D Line	ASTM D 542	-	1.57
Light Transmission at 550 nm	ASTM D 1003	%	90
Haze	ASTM D 1003	%	2.2
Other Properties			
Density	ASTM D 792	-	1.04

Clearblend 165

Methyl Methacrylate Butadiene Styrene (MBS)

INEOS
STYROLUTION

Property, Test Condition	Standard	Unit	Values
Water Absorption, Saturated at 23°C	ASTM D 570	%	0.1
Processing			
Linear Mold Shrinkage	ASTM D 955	in/in	0.002 to 0.006
Melt Temperature Range		°F	400 - 460
Mold Temperature Range		°F	80 - 130
Rear Temperature Range		°F	355 - 415
Middle Temperature Range		°F	365 - 425
Front Temperature Range		°F	375 - 435
Injection Velocity		in/s	Moderate to Fast
Drying Temperature		°F	150
Drying Time		h	2
Max Service Temperature		°F	480

Typical values for uncolored products

SUPPLY FORM

Clearblend resins are available in 25kg bags or octabin cartons.

PROCESSING

Clearblend is a low moisture absorption copolymer and in many instances processes readily without pre-drying. There are combinations of conditions that require the product to be dried, such as high humidity and heavy section molding. Two hours at 60 °C (140 °F) is adequate for most applications. Dehumidifying type driers are recommended. To obtain maximum clarity and gloss from this product, it is necessary to have a highly polished mold. Design of gates, runners and sprues can be patterned after standard practice for high-heat polystyrene. All mold surfaces must be temperature controlled at 54 °C (130 °F) for optimum clarity and surface gloss. For optimum clarity, machine cylinders, barrels, screws, valves, etc. should be thoroughly cleaned before processing. Contamination by other materials will cause streaking or haze.

PRODUCT SAFETY

During processing of Clearblend small quantities of styrene monomer may be released into the atmosphere. At styrene vapor concentrations below 20ppm no negative effects on health are expected. In our experience, the concentration of styrene does not exceed 1 ppm in well ventilated workplaces - that is were five to eight air changes per hour are made.

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