

## Transparent Styrenic Copolymer

### FEATURES

- **Styrene-Acrylic Copolymer**
- Better mechanical properties than GPPS
- Scratch resistant
- Good clarity on blends with SBCs
- Meets USP XXI Spec. for Class VI Plastics
- FDA: 21 CFR 177.1830

**APPLICATIONS** Injection molding, Hangers, Display (POP), Appliances, Office wares, Lighting

### PROPERTIES

	ENGLISH UNITS	TYPICAL VALUES	S.I. UNITS	TYPICAL VALUES	ASTM
<b>PHYSICAL</b>					
Specific Gravity	-	1.08	-	1.08	D792
Melt Flow Rate (G-200°C/5 Kg)	g/10 min	1.8	g/10 min	1.8	D1238
Mold Shrinkage	in/in	4E-03	mm/mm	4E-03	D955
<b>MECHANICAL</b>					
Tensile Strength, Break	psi	7,500	MPa	52	D638
Break Elongation	%	5.0	%	5.0	D638
Tensile Modulus	psi	475,000	MPa	3,275	D638
Flexural Strength	psi	16,500	MPa	114	D790
Flexural Modulus	psi	485,000	MPa	3,344	D790
<b>IMPACT RESISTANCE</b>					
Notched Izod Impact (0.125 in)	ft-lb/in	0.3	J/m	16	D256
Gardner Impact	in-lb	2.0	J	33	D3029
<b>THERMAL</b>					
HDT @ 264 psi (unannealed)	°F	192	°C	89	D648
Vicat Softening Temperature	°F	216	°C	102	D1525
<b>OPTICAL</b>					
Transmittance	%	90	%	90	D1003
Haze	%	0.3	%	0.3	D1003
<b>IGNITION CHARACTERISTICS</b>					
Flammability 0.060 in	-	HB	-	HB	UL 94

.Typical Values represent average laboratory values and are intended as guides only, not as specific specification limits.

.Properties designated in this standard have been determined in accordance with the current issues of the specified testing methods.

.All molded samples were an 1/8 inch (3.2 mm) thick unless noted

## ADDITIONAL INFORMATION

Resirene CET-116® is a styrene-acrylic copolymer and can be processed under very similar conditions to those of GPPS, with minor differences briefly described below.

### AVAILABILITY

Resirene's styrenic resins are available in bulk, 25 kg bags (55 lbs), and 500 - 750 kg boxes (1,100 - 1,652 lbs)

### DRYING

This material presents very low moisture absorption and it is a common practice to mold it without pre-drying. However, if the material has been exposed to high moisture environment or direct contact with water, it is recommended to dry it for 2 hours at 167°F to 176°F (75°C to 80°C).

### MOLD

In order to get the best appearance in molded parts, it is strongly recommended to use highly polished mold, in order to obtain high gloss surfaces. In general, mold control temperature has no effect upon material and finished product clarity.

### MOLDING CONDITIONS

Resirene CET-116® is a styrene-based copolymer; but it has some differences with respect to polystyrene so good purge practices are important. If CET gets contaminated with GPPS or HIPS, such contamination will be reflected as a hazy effect. Contamination with SAN resins will result on delamination because SMMA and SAN are non-compatible.

These conditions may vary from a molding machine to another, but following conditions are suggested for a start-up approach.

	START POINT	RANGE
Melt Temperature	410 °F (210 °C)	392 - 446 °F - (200 - 230 °C)
Mold Temperature	120 °F (49 °C)	100 - 180 °F - (38 - 82 °C)
Maximum Recommended Temperature	464 °F (240 °C)	

**WARNING:** As most of plastics materials, combustion of this material may cause hazardous fumes and gases, as well as situations that could be dangerous for health, specially in closed places. It should be noted that excessive heating or too long residence times may cause discoloration, degradation or yellowing.

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Resirene, S.A. De C.V. Paseo de Tamarindos, No. 400-B Piso 26, Bosques de las Lomas, Delegación Cuajimalpa, México, D. F. C. P. 05120

Tel. (+52) 55 5261-8000 / Customer Service (+52) 55 5261-8285 / Fax (+52) 55 5261-8255

[www.resirene.com.mx](http://www.resirene.com.mx)

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