



## ULTEM™ Resin AUT195

### Americas: COMMERCIAL

High flow Polyetherimide blend for automotive lighting applications where highly metallized, reflective surfaces are required. Haze onset temperature of 195C (SABIC test method).

TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	Unit	Standard
<b>MECHANICAL</b>			
Tensile Stress, yld, Type I, 5 mm/min	980	kgf/cm <sup>2</sup>	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	70	%	ASTM D 638
Flexural Stress, yld, 2.6 mm/min, 100 mm span	1470	kgf/cm <sup>2</sup>	ASTM D 790
Flexural Modulus, 2.6 mm/min, 100 mm span	32300	kgf/cm <sup>2</sup>	ASTM D 790
Tensile Modulus, 1 mm/min	3000	MPa	ISO 527
Flexural Modulus, 2 mm/min	3100	MPa	ISO 178
<b>IMPACT</b>			
Izod Impact, unnotched, 23°C	212	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	5	cm-kgf/cm	ASTM D 256
Izod Impact, Reverse Notched, 3.2 mm	217	cm-kgf/cm	ASTM D 256
Izod Impact, notched 80*10*4 +23°C	5	kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	5	kJ/m <sup>2</sup>	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	4	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	4	kJ/m <sup>2</sup>	ISO 179/1eA
<b>THERMAL</b>			
HDT, 1.82 MPa, 6.4 mm, unannealed	190	°C	ASTM D 648
Thermal Conductivity	0.23	W/m-°C	ISO 8302
CTE, 23°C to 150°C, flow	6.E-05	1/°C	ISO 11359-2
CTE, 23°C to 150°C, xflow	6.E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/120	205	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	195	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	180	°C	ISO 75/Ae
Metallized Haze Onset	195	°C	SABIC Method

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.  
(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Internal measurements according to UL standards.

(5) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

(6) Needs hard coat to consistently pass 60 sec Vertical Burn.

Source GMD, last updated:

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TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	Unit	Standard
<b>PHYSICAL</b>			
Specific Gravity	1.26	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	0.5 - 0.7	%	SABIC Method
Mold Shrinkage on Tensile Bar, xflow (2) (5)	0.5 - 0.7	%	SABIC Method
Melt Flow Rate, 337°C/6.6 kgf	24	g/10 min	ASTM D 1238
Density	1.27	g/cm <sup>3</sup>	ISO 1183
Water Absorption, (23°C/sat)	0.9	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.5	%	ISO 62
Melt Volume Rate, MVR at 340°C/5.0 kg	16	cm <sup>3</sup> /10 min	ISO 1133

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(6) Needs hard coat to consistently pass 60 sec Vertical Burn.

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
<b>Injection Molding</b>		
Drying Temperature	130 - 140	°C
Drying Time	3 - 4	hrs
Melt Temperature	340 - 380	°C
Nozzle Temperature	340 - 360	°C
Front - Zone 3 Temperature	340 - 360	°C
Middle - Zone 2 Temperature	330 - 350	°C
Rear - Zone 1 Temperature	320 - 340	°C
Hopper Temperature	80 - 100	°C
Mold Temperature	125 - 140	°C

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