

Ultem\* Resin AUT195M

Europe-Africa-Middle East: DEVELOPMENTAL

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

Property

TYPICAL PROPERTIES <sup>(1)</sup>			
MECHANICAL	Value	Unit	Standard
Tensile Stress, yld, Type I, 5 mm/min	97	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	85	MPa	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	7	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	70	%	ASTM D 638
Tensile Modulus, 5 mm/min	3300	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	145	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	3170	MPa	ASTM D 790
Tensile Stress, yield, 50 mm/min	95	MPa	ISO 527
Tensile Stress, break, 50 mm/min	75	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	6.5	%	ISO 527
Tensile Strain, break, 50 mm/min	20	%	ISO 527
Tensile Modulus, 1 mm/min	3000	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	125	MPa	ISO 178
Flexural Modulus, 2 mm/min	3100	MPa	ISO 178
IMPACT	Value	Unit	Standard
Izod Impact, unnotched, 23°C	2083	J/m	ASTM D 4812
Izod Impact, notched, 23°C	53	J/m	ASTM D 256
Izod Impact, notched, -30°C	55	J/m	ASTM D 256
Izod Impact, Reverse Notched, 3.2 mm	2670	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	50	J	ASTM D 3763
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 -30°C, V-notch Edgew 80*10*3 sp=62mm	4	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	4	kJ/m <sup>2</sup>	ISO 179/1eA
THERMAL	Value	Unit	Standard
Vicat Softening Temp, Rate B/50	209	°C	ASTM D 1525
HDT, 1.82 MPa, 3.2mm, unannealed	187	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	191	°C	ASTM D 648
Thermal Conductivity	0.23	W/m-°C	ISO 8302
CTE, 23°C to 150°C, flow	5.E-05	1/°C	ISO 11359-2
CTE, 23°C to 150°C, xflow	5.E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate A/50	210	°C	ISO 306
Vicat Softening Temp, Rate B/50	200	°C	ISO 306
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/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	180	°C	ISO 75/Af
Metallized Haze Onset	195	°C	SABIC Method
PHYSICAL	Value	Unit	Standard

Specific Gravity	1.26	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	0.5 - 0.7	%	SABIC Method
Mold Shrinkage, xflow, 3.2 mm (5)	0.5 - 0.7	%	SABIC Method
Melt Flow Rate, 337°C/6.6 kgf	24	g/10 min	ASTM D 1238
Density	1.26	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

Source GMD, last updated:2010/08/19

## Processing

Parameter	Value	Unit
Injection Molding		
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

Source GMD, last updated:2010/08/19

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR [\(LOCAL SALES OFFICE\)](#) FOR AVAILABILITY IN YOUR REGION

(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.

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