

## Ultem\* Resin EXUM0167

Americas: COMMERCIAL

Improved ductility, transparent, standard flow Polyetherimide blend (Tg 200C) with internal mold release and enhanced ductility. ECO Conforming.

### Property

TYPICAL PROPERTIES <sup>(1)</sup>			
	Value	Unit	Standard
<b>MECHANICAL</b>			
Tensile Stress, yld, Type I, 5 mm/min	103	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	80	%	ASTM D 638
Tensile Modulus, 5 mm/min	3210	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	3500	MPa	ASTM D 790
Hardness, Rockwell M	108	-	ASTM D 785
Tensile Stress, yield, 5 mm/min	98	MPa	ISO 527
Tensile Stress, break, 5 mm/min	80	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	7	%	ISO 527
Tensile Strain, break, 5 mm/min	80	%	ISO 527
Tensile Modulus, 1 mm/min	2500	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	135	MPa	ISO 178
Flexural Modulus, 2 mm/min	3100	MPa	ISO 178
<b>IMPACT</b>			
Izod Impact, unnotched, 23°C	NB	J/m	ASTM D 4812
Izod Impact, unnotched, -30°C	NB	J/m	ASTM D 4812
Izod Impact, notched, 23°C	35	J/m	ASTM D 256
Izod Impact, notched, -30°C	38	J/m	ASTM D 256
Izod Impact, Reverse Notched, 3.2 mm	2135	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	50	J	ASTM D 3763
Instrumented Impact Total Energy, -20°C	10	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	2	kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	2	kJ/m <sup>2</sup>	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	2	kJ/m <sup>2</sup>	ISO 179/1eA
<b>THERMAL</b>			
Vicat Softening Temp, Rate B/50	192	°C	ASTM D 1525
HDT, 1.82 MPa, 3.2mm, unannealed	173	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	178	°C	ASTM D 648
CTE, -20°C to 150°C, flow	6.E-05	1/°C	ASTM E 831
CTE, -20°C to 150°C, xflow	6.E-05	1/°C	ASTM E 831
CTE, 23°C to 150°C, flow	5.5E-05	1/°C	ISO 11359-2
CTE, 23°C to 150°C, xflow	5.5E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	192	°C	ISO 306
Vicat Softening Temp, Rate B/120	195	°C	ISO 306
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	168	°C	ISO 75/Ae
<b>PHYSICAL</b>			
	Value	Unit	Standard

Specific Gravity	1.28	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.5 - 0.7	%	SABIC Method
Melt Flow Rate, 337°C/6.6 kgf	23	g/10 min	ASTM D 1238
Density	1.28	g/cm <sup>3</sup>	ISO 1183
Water Absorption, (23°C/sat)	0.37	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.09	%	ISO 62
Melt Volume Rate, MVR at 360°C/5.0 kg	28	cm <sup>3</sup> /10 min	ISO 1133
<b>ELECTRICAL</b>	<b>Value</b>	<b>Unit</b>	<b>Standard</b>
Volume Resistivity	1.E+17	Ohm-cm	ASTM D 257
Surface Resistivity	1.6E+17	Ohm	ASTM D 257
Dissipation Factor, 1 MHz	0.0061	-	ASTM D 150

Source GMD, last updated:06/02/2006

## Processing

Parameter	Value	Unit
<b>Injection Molding</b>		
Drying Temperature	135	°C
Drying Time	4 - 6	hrs
Drying Time (Cumulative)	12	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	330 - 355	°C
Nozzle Temperature	325 - 350	°C
Front - Zone 3 Temperature	330 - 355	°C
Middle - Zone 2 Temperature	320 - 345	°C
Rear - Zone 1 Temperature	310 - 330	°C
Mold Temperature	95 - 135	°C
Back Pressure	0.3 - 0.7	MPa
Screw Speed	40 - 70	rpm
Shot to Cylinder Size	40 - 60	%
Vent Depth	0.025 - 0.076	mm

Source GMD, last updated:06/02/2006

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.

**Disclaimer** : THE MATERIALS AND PRODUCTS OF THE BUSINESSES MAKING UP THE SABIC INNOVATIVE PLASTICS COMPANY, ITS SUBSIDIARIES AND AFFILIATES ("SABIC IP"), ARE SOLD SUBJECT TO SABIC IP' S STANDARD CONDITIONS OF SALE, WHICH ARE INCLUDED IN THE APPLICABLE DISTRIBUTOR OR OTHER SALES AGREEMENT, PRINTED ON THE BACK OF ORDER ACKNOWLEDGMENTS AND INVOICES, AND AVAILABLE UPON REQUEST. ALTHOUGH ANY INFORMATION, RECOMMENDATIONS, OR ADVICE CONTAINED HEREIN IS GIVEN IN GOOD FAITH, SABIC IP MAKES NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, (I) THAT THE RESULTS DESCRIBED HEREIN WILL BE OBTAINED UNDER END-USE CONDITIONS, OR (II) AS TO THE EFFECTIVENESS OR SAFETY OF ANY DESIGN INCORPORATING SABIC IP MATERIALS, PRODUCTS, RECOMMENDATIONS OR ADVICE. EXCEPT AS PROVIDED IN SABIC IP' S STANDARD CONDITIONS OF SALE, SABIC IP AND ITS REPRESENTATIVES SHALL IN NO EVENT BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF ITS MATERIALS OR PRODUCTS DESCRIBED HEREIN. Each user bears full responsibility for making its own determination as to the suitability of SABIC IP' s materials, products, recommendations, or advice for its own particular use. Each

user must identify and perform all tests and analyses necessary to assure that its finished parts incorporating SABIC IP materials or products will be safe and suitable for use under end-use conditions. Nothing in this or any other document, nor any oral recommendation or advice, shall be deemed to alter, vary, supersede, or waive any provision of SABIC IP' s Standard Conditions of Sale or this Disclaimer, unless any such modification is specifically agreed to in a writing signed by SABIC IP. No statement contained herein concerning a possible or suggested use of any material, product or design is intended, or should be construed, to grant any license under any patent or other intellectual property right of SABIC Innovative Plastics Company or any of its subsidiaries or affiliates covering such use or design, or as a recommendation for the use of such material, product or design in the infringement of any patent or other intellectual property right

\* Ultem is a trademark of the SABIC Innovative Plastics Company

© 1997-2008 SABIC Innovative Plastics Company.All rights reserved