

Ultem* Resin 1010P
Americas: COMMERCIAL

Enhanced flow Polyetherimide (Tg 217C) in 350 micron powder. ECO Conforming.

| TYPICAL PROPERTIES ¹ | TYPICAL VALUE | Unit | Standard |
|---|---------------|---------------------|-------------|
| MECHANICAL | | | |
| Tensile Stress, yld, Type I, 5 mm/min | 1120 | kgf/cm ² | ASTM D 638 |
| Tensile Stress, brk, Type I, 5 mm/min | 1120 | kgf/cm ² | ASTM D 638 |
| Tensile Strain, yld, Type I, 5 mm/min | 7 | % | ASTM D 638 |
| Tensile Strain, brk, Type I, 5 mm/min | 60 | % | ASTM D 638 |
| Tensile Modulus, 5 mm/min | 36500 | kgf/cm ² | ASTM D 638 |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 36550 | kgf/cm ² | ASTM D 790 |
| Flexural Stress, yld, 2.6 mm/min, 100 mm span | 1680 | kgf/cm ² | ASTM D 790 |
| Flexural Modulus, 1.3 mm/min, 50 mm span | 35600 | kgf/cm ² | ASTM D 790 |
| Hardness, Rockwell M | 109 | - | ASTM D 785 |
| Taber Abrasion, CS-17, 1 kg | 10 | mg/1000cy | ASTM D 1044 |
| Tensile Stress, yield, 5 mm/min | 105 | MPa | ISO 527 |
| Tensile Stress, break, 5 mm/min | 85 | MPa | ISO 527 |
| Tensile Strain, yield, 5 mm/min | 6 | % | ISO 527 |
| Tensile Strain, break, 5 mm/min | 60 | % | ISO 527 |
| Tensile Modulus, 1 mm/min | 3200 | MPa | ISO 527 |
| Flexural Stress, yield, 2 mm/min | 160 | MPa | ISO 178 |
| Flexural Modulus, 2 mm/min | 3300 | MPa | ISO 178 |
| IMPACT | | | |
| Izod Impact, unnotched, 23°C | 136 | cm-kgf/cm | ASTM D 4812 |
| Izod Impact, notched, 23°C | 3 | cm-kgf/cm | ASTM D 256 |
| Izod Impact, notched, -30°C | 3 | cm-kgf/cm | ASTM D 256 |
| Izod Impact, Reverse Notched, 3.2 mm | 119 | cm-kgf/cm | ASTM D 256 |



(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±176.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.

Source GMD, last updated:

PLEASE CONTACT YOUR LOCAL SALES OFFICE FOR AVAILABILITY IN YOUR AREA.

DISCLAIMER: THE MATERIALS, PRODUCTS AND SERVICES OF SABIC INNOVATIVE PLASTICS HOLDING BV, ITS SUBSIDIARIES AND AFFILIATES ("SELLER"), ARE SOLD SUBJECT TO SELLER'S STANDARD CONDITIONS OF SALE, WHICH CAN BE FOUND AT <http://www.sabic-ip.com> AND ARE AVAILABLE UPON REQUEST. ALTHOUGH ANY INFORMATION OR RECOMMENDATION CONTAINED HEREIN IS GIVEN IN GOOD FAITH, SELLER 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 SELLER'S PRODUCTS, SERVICES OR RECOMMENDATIONS. EXCEPT AS PROVIDED IN SELLER'S STANDARD CONDITIONS OF SALE, SELLER SHALL NOT BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF ITS PRODUCTS OR SERVICES DESCRIBED HEREIN. Each user is responsible for making its own determination as to the suitability of Seller's products, services or recommendations for the user's particular use through appropriate end-use testing and analysis. Nothing in any document or oral statement shall be deemed to alter or waive any provision of Seller's Standard Conditions of Sale or this Disclaimer unless it is specifically agreed to in a writing signed by Seller. No statement by Seller concerning a possible use of any product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right of Seller or as a recommendation for the use of such product, service or design in a manner that infringes any patent or other intellectual property right. SABIC Innovative Plastics is a trademark of SABIC Holding Europe B.V.

* Ultem is a trademark of SABIC Innovative Plastics IP BV

© 1997-2011 SABIC Innovative Plastics Holding BV. All rights reserved

Ultem* Resin 1010P
Americas: COMMERCIAL

| TYPICAL PROPERTIES ¹ | TYPICAL VALUE | Unit | Standard |
|--|---------------|-------------------|----------------|
| IMPACT | | | |
| Gardner, 23°C | 345 | cm-kgf | ASTM D 3029 |
| Instrumented Impact Total Energy, 23°C | 387 | cm-kgf | ASTM D 3763 |
| Izod Impact, notched 80*10*4 +23°C | NB | kJ/m ² | ISO 180/1A |
| Izod Impact, notched 80*10*4 -30°C | NB | kJ/m ² | ISO 180/1A |
| Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm | 5 | kJ/m ² | ISO 179/1eA |
| THERMAL | | | |
| Vicat Softening Temp, Rate B/50 | 211 | °C | ASTM D 1525 |
| HDT, 1.82 MPa, 3.2mm, unannealed | 190 | °C | ASTM D 648 |
| HDT, 0.45 MPa, 6.4 mm, unannealed | 207 | °C | ASTM D 648 |
| HDT, 1.82 MPa, 6.4 mm, unannealed | 198 | °C | ASTM D 648 |
| CTE, -40°C to 40°C, xflow | 5.5E-05 | 1/°C | ASTM E 831 |
| CTE, -20°C to 150°C, flow | 5.5E-05 | 1/°C | ASTM E 831 |
| Thermal Conductivity | 0.22 | W/m-°C | ASTM C 177 |
| CTE, -40°C to 40°C, flow | 5.5E-05 | 1/°C | ISO 11359-2 |
| CTE, -40°C to 40°C, xflow | 5.5E-05 | 1/°C | ISO 11359-2 |
| Ball Pressure Test, 75°C +/- 2°C | Passes | - | IEC 60695-10-2 |
| Vicat Softening Temp, Rate B/50 | 211 | °C | ISO 306 |
| Vicat Softening Temp, Rate B/120 | 212 | °C | ISO 306 |
| HDT/af, 1.8 MPa Flatw 80*10*4 sp=64mm | 190 | °C | ISO 75/af |
| PHYSICAL | | | |
| Specific Gravity | 1.27 | - | ASTM D 792 |
| Water Absorption, 24 hours | 0.25 | % | ASTM D 570 |
| Water Absorption, equilibrium, 23C | 1.25 | % | ASTM D 570 |
| Mold Shrinkage, flow, 3.2 mm (5) | 0.5 - 0.7 | % | SABIC Method |
| Melt Flow Rate, 337°C/6.6 kgf | 17.8 | g/10 min | ASTM D 1238 |

广州华秀塑胶有限公司
 (Sabic沙伯基础创新塑料 一级经销商)
 www.va-so.cn 联系电话: 020-82582555

(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±176.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.

Source GMD, last updated:

PLEASE CONTACT YOUR LOCAL SALES OFFICE FOR AVAILABILITY IN YOUR AREA.

DISCLAIMER : THE MATERIALS, PRODUCTS AND SERVICES OF SABIC INNOVATIVE PLASTICS HOLDING BV, ITS SUBSIDIARIES AND AFFILIATES ("SELLER"), ARE SOLD SUBJECT TO SELLER'S STANDARD CONDITIONS OF SALE, WHICH CAN BE FOUND AT <http://www.sabic-ip.com>. AND ARE AVAILABLE UPON REQUEST. ALTHOUGH ANY INFORMATION OR RECOMMENDATION CONTAINED HEREIN IS GIVEN IN GOOD FAITH, SELLER 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 SELLER'S PRODUCTS, SERVICES OR RECOMMENDATIONS. EXCEPT AS PROVIDED IN SELLER'S STANDARD CONDITIONS OF SALE, SELLER SHALL NOT BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF ITS PRODUCTS OR SERVICES DESCRIBED HEREIN. Each user is responsible for making its own determination as to the suitability of Seller's products, services or recommendations for the user's particular use through appropriate end-use testing and analysis. Nothing in any document or oral statement shall be deemed to alter or waive any provision of Seller's Standard Conditions of Sale or this Disclaimer, unless it is specifically agreed to in a writing signed Seller. No statement Seller concerning a possible use of any product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right of Seller or as a recommendation for the use of such product, service or design in a manner that infringes any patent or other intellectual property right. SABIC Innovative Plastics is a trademark of SABIC Holding Europe B.V.

* Ultem is a trademark of SABIC Innovative Plastics IP BV

© 1997-2011 SABIC Innovative Plastics Holding BV. All rights reserved

Ultem* Resin 1010P
Americas: COMMERCIAL

| TYPICAL PROPERTIES ¹ | TYPICAL VALUE | Unit | Standard |
|---------------------------------------|---------------|-------------------------|-------------|
| PHYSICAL | | | |
| Density | 1.27 | g/cm ³ | ISO 1183 |
| Water Absorption, (23°C/sat) | 1.25 | % | ISO 62 |
| Moisture Absorption (23°C / 50% RH) | 0.7 | % | ISO 62 |
| Melt Volume Rate, MVR at 340°C/5.0 kg | 13 | cm ³ /10 min | ISO 1133 |
| ELECTRICAL | | | |
| Volume Resistivity | 1.E+17 | Ohm-cm | ASTM D 257 |
| Dielectric Strength, in air, 1.6 mm | 32.6 | kV/mm | ASTM D 149 |
| Dielectric Strength, in oil, 1.6 mm | 27.9 | kV/mm | ASTM D 149 |
| Relative Permittivity, 1 kHz | 3.15 | - | ASTM D 150 |
| Dissipation Factor, 1 kHz | 0.0013 | - | ASTM D 150 |
| Dissipation Factor, 2450 MHz | 0.0025 | - | ASTM D 150 |
| FLAME CHARACTERISTICS | | | |
| Oxygen Index (LOI) | 44 | % | ASTM D 2863 |

广州华秀塑胶有限公司
(Sabic沙伯基础创新塑料 一级经销商)
www.va-so.cn 联系电话: 020-82582555

(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±176.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.

Source GMD, last updated:

PLEASE CONTACT YOUR LOCAL SALES OFFICE FOR AVAILABILITY IN YOUR AREA.

DISCLAIMER : THE MATERIALS, PRODUCTS AND SERVICES OF SABIC INNOVATIVE PLASTICS HOLDING BV, ITS SUBSIDIARIES AND AFFILIATES ("SELLER"), ARE SOLD SUBJECT TO SELLER'S STANDARD CONDITIONS OF SALE, WHICH CAN BE FOUND AT <http://www.sabic-ip.com>. AND ARE AVAILABLE UPON REQUEST. ALTHOUGH ANY INFORMATION OR RECOMMENDATION CONTAINED HEREIN IS GIVEN IN GOOD FAITH, SELLER 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 SELLER'S PRODUCTS, SERVICES OR RECOMMENDATIONS. EXCEPT AS PROVIDED IN SELLER'S STANDARD CONDITIONS OF SALE, SELLER SHALL NOT BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF ITS PRODUCTS OR SERVICES DESCRIBED HEREIN. Each user is responsible for making its own determination as to the suitability of Seller's products, services or recommendations for the user's particular use through appropriate end-use testing and analysis. Nothing in any document or oral statement shall be deemed to alter or waive any provision of Seller's Standard Conditions of Sale or this Disclaimer, unless it is specifically agreed to in a writing signed Seller. No statement Seller concerning a possible use of any product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right of Seller or as a recommendation for the use of such product, service or design in a manner that infringes any patent or other intellectual property right. SABIC Innovative Plastics is a trademark of SABIC Holding Europe B.V.

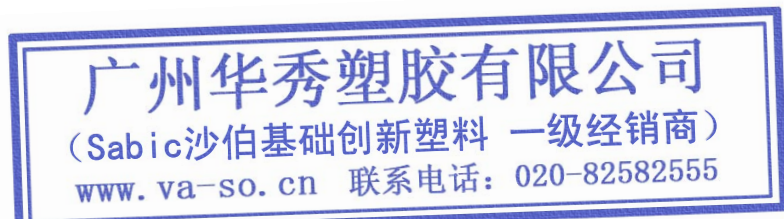
* Ultem is a trademark of SABIC Innovative Plastics IP BV

© 1997-2011 SABIC Innovative Plastics Holding BV. All rights reserved

Ultem* Resin 1010P

Americas: COMMERCIAL

| PROCESSING PARAMETERS | TYPICAL VALUE | Unit |
|-----------------------------|---------------|------|
| Injection Molding | | |
| Drying Temperature | 150 | °C |
| Drying Time | 4 - 6 | hrs |
| Drying Time (Cumulative) | 24 | hrs |
| Maximum Moisture Content | 0.02 | % |
| Melt Temperature | 350 - 400 | °C |
| Nozzle Temperature | 345 - 400 | °C |
| Front - Zone 3 Temperature | 345 - 400 | °C |
| Middle - Zone 2 Temperature | 340 - 400 | °C |
| Rear - Zone 1 Temperature | 330 - 400 | °C |
| Mold Temperature | 135 - 165 | °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 |



(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±176,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.

Source GMD, last updated:

PLEASE CONTACT YOUR LOCAL SALES OFFICE FOR AVAILABILITY IN YOUR AREA.

DISCLAIMER : THE MATERIALS, PRODUCTS AND SERVICES OF SABIC INNOVATIVE PLASTICS HOLDING BV, ITS SUBSIDIARIES AND AFFILIATES ("SELLER"), ARE SOLD SUBJECT TO SELLER'S STANDARD CONDITIONS OF SALE, WHICH CAN BE FOUND AT <http://www.sabic-ip.com> AND ARE AVAILABLE UPON REQUEST. ALTHOUGH ANY INFORMATION OR RECOMMENDATION CONTAINED HEREIN IS GIVEN IN GOOD FAITH, SELLER 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 SELLER'S PRODUCTS, SERVICES OR RECOMMENDATIONS. EXCEPT AS PROVIDED IN SELLER'S STANDARD CONDITIONS OF SALE, SELLER SHALL NOT BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF ITS PRODUCTS OR SERVICES DESCRIBED HEREIN. Each user is responsible for making its own determination as to the suitability of Seller's products, services or recommendations for the user's particular use through appropriate end-use testing and analysis. Nothing in any document or oral statement shall be deemed to alter or waive any provision of Seller's Standard Conditions of Sale or this Disclaimer, unless it is specifically agreed to in a writing signed Seller. No statement Seller concerning a possible use of any product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right of Seller or as a recommendation for the use of such product, service or design in a manner that infringes any patent or other intellectual property right. SABIC Innovative Plastics is a trademark of SABIC Holding Europe B.V.

* Ultem is a trademark of SABIC Innovative Plastics IP BV

© 1997-2011 SABIC Innovative Plastics Holding BV. All rights reserved