

Lexan* Resin 123R

Europe-Africa-Middle East: COMMERCIAL

LEXAN 123R is a low viscosity multi purpose U.V. stabilized grade and contains a release agent to ensure easy processing. LEXAN 123R is available in transparent, translucent and opaque colours.

| TYPICAL PROPERTIES ¹ | TYPICAL VALUE | Unit | Standard |
|---|---------------|-------------------|----------------|
| MECHANICAL | | | |
| Taber Abrasion, CS-17, 1 kg | 10 | mg/1000cy | SABIC Method |
| Tensile Stress, yield, 50 mm/min | 63 | MPa | ISO 527 |
| Tensile Stress, break, 50 mm/min | 65 | MPa | ISO 527 |
| Tensile Strain, yield, 50 mm/min | 6 | % | ISO 527 |
| Tensile Strain, break, 50 mm/min | 100 | % | ISO 527 |
| Tensile Modulus, 1 mm/min | 2350 | MPa | ISO 527 |
| Flexural Stress, yield, 2 mm/min | 90 | MPa | ISO 178 |
| Flexural Modulus, 2 mm/min | 2300 | MPa | ISO 178 |
| Hardness, H358/30 | 95 | MPa | ISO 2039-1 |
| IMPACT | | | |
| Izod Impact, unnotched 80*10*3 +23°C | NB | kJ/m ² | ISO 180/1U |
| Izod Impact, unnotched 80*10*3 -30°C | NB | kJ/m ² | ISO 180/1U |
| Izod Impact, notched 80*10*3 +23°C | 65 | kJ/m ² | ISO 180/1A |
| Izod Impact, notched 80*10*3 -30°C | 11 | kJ/m ² | ISO 180/1A |
| Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm | 65 | kJ/m ² | ISO 179/1eA |
| Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm | 12 | kJ/m ² | ISO 179/1eA |
| Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm | NB | kJ/m ² | ISO 179/1eU |
| Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm | NB | kJ/m ² | ISO 179/1eU |
| Charpy Impact, notched, 23°C | 35 | kJ/m ² | ISO 179/2C |
| THERMAL | | | |
| Thermal Conductivity | 0.2 | W/m-°C | ISO 8302 |
| CTE, 23°C to 80°C, flow | 7.E-05 | 1/°C | ISO 11359-2 |
| Ball Pressure Test, 125°C +/- 2°C | PASSES | - | IEC 60695-10-2 |

(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 All information, recommendation or advice given SABIC INNOVATIVE PLASTICS HOLDING BV, or any of its subsidiaries, affiliates or authorized representatives, whether written or oral, is given in good faith, to the best of its knowledge and based on current procedures in effect. Each user of the products shall convince himself, through all available sources (including finished product testing in its appropriate environment) of the suitability of the products supplied for its own particular purpose. Because actual use of the products the user is beyond the control of SABIC INNOVATIVE PLASTICS HOLDING BV, its subsidiaries and affiliates, such use is in the exclusive responsibility of the user. SABIC INNOVATIVE PLASTICS HOLDING BV, its subsidiaries and affiliates cannot be held responsible respectively liable for any loss incurred through incorrect or faulty use of the products. Information, recommendations and/or advice are neither made to infringe on any patents, nor to grant a license under any patent or intellectual property right of SABIC INNOVATIVE PLASTICS HOLDING BV or any of its subsidiaries or affiliated companies, nor to grant the right to file for any patent protection

* Lexan is a trademark of SABIC Innovative Plastics IP BV

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

Lexan* Resin 123R

Europe-Africa-Middle East: COMMERCIAL

| TYPICAL PROPERTIES ¹ | TYPICAL VALUE | Unit | Standard |
|---|---------------|-------------------------|----------------|
| THERMAL | | | |
| Ball Pressure Test, approximate maximum | 140 | °C | IEC 60695-10-2 |
| Vicat Softening Temp, Rate B/50 | 140 | °C | ISO 306 |
| Vicat Softening Temp, Rate B/120 | 141 | °C | ISO 306 |
| HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm | 133 | °C | ISO 75/Be |
| HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm | 122 | °C | ISO 75/Ae |
| Relative Temp Index, Elec | 130 | °C | UL 746B |
| Relative Temp Index, Mech w/impact | 125 | °C | UL 746B |
| Relative Temp Index, Mech w/o impact | 125 | °C | UL 746B |
| PHYSICAL | | | |
| Mold Shrinkage on Tensile Bar, flow (2) | 0.5 - 0.7 | % | SABIC Method |
| Density | 1.2 | g/cm ³ | ISO 1183 |
| Water Absorption, (23°C/sat) | 0.35 | % | ISO 62 |
| Moisture Absorption (23°C / 50% RH) | 0.15 | % | ISO 62 |
| Melt Volume Rate, MVR at 300°C/1.2 kg | 21 | cm ³ /10 min | ISO 1133 |
| OPTICAL | | | |
| Light Transmission, 2.54 mm | 88 - 90 | % | ASTM D 1003 |
| Haze, 2.54 mm | <0.8 | % | ASTM D 1003 |
| Refractive Index | 1.586 | - | ISO 489 |
| ELECTRICAL | | | |
| Volume Resistivity | >1.E+15 | Ohm-cm | IEC 60093 |
| Surface Resistivity, ROA | >1.E+15 | Ohm | IEC 60093 |
| Dielectric Strength, in oil, 3.2 mm | 17 | kV/mm | IEC 60243-1 |
| Relative Permittivity, 1 MHz | 2.7 | - | IEC 60250 |
| Dissipation Factor, 50/60 Hz | 0.001 | - | IEC 60250 |
| Dissipation Factor, 1 MHz | 0.01 | - | IEC 60250 |
| Relative Permittivity, 50/60 Hz | 2.7 | - | IEC 60250 |

(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 All information, recommendation or advice given SABIC INNOVATIVE PLASTICS HOLDING BV, or any of its subsidiaries, affiliates or authorized representatives, whether written or oral, is given in good faith, to the best of its knowledge and based on current procedures in effect. Each user of the products shall convince himself, through all available sources (including finished product testing in its appropriate environment) of the suitability of the products supplied for its own particular purpose. Because actual use of the products the user is beyond the control of SABIC INNOVATIVE PLASTICS HOLDING BV, its subsidiaries and affiliates, such use is in the exclusive responsibility of the user. SABIC INNOVATIVE PLASTICS HOLDING BV, its subsidiaries and affiliates cannot be held responsible respectively liable for any loss incurred through incorrect or faulty use of the products. Information, recommendations and/or advice are neither made to infringe on any patents, nor to grant a license under any patent or intellectual property right of SABIC INNOVATIVE PLASTICS HOLDING BV or any of its subsidiaries or affiliated companies, nor to grant the right to file for any patent protection

* Lexan is a trademark of SABIC Innovative Plastics IP BV

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

Lexan* Resin 123R

Europe-Africa-Middle East: COMMERCIAL

| TYPICAL PROPERTIES ¹ | TYPICAL VALUE | Unit | Standard |
|--|---------------|------|----------------|
| FLAME CHARACTERISTICS | | | |
| UL Recognized, 94HB Flame Class Rating (3) | 0.75 | mm | UL 94 |
| UL Recognized, 94HB Flame Class Rating 2nd value (3) | 3 | mm | UL 94 |
| Glow Wire Flammability Index 850°C, passes at | 1 | mm | IEC 60695-2-12 |
| Oxygen Index (LOI) | 25 | % | ISO 4589 |

(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 All information, recommendation or advice given SABIC INNOVATIVE PLASTICS HOLDING BV, or any of its subsidiaries, affiliates or authorized representatives, whether written or oral, is given in good faith, to the best of its knowledge and based on current procedures in effect. Each user of the products shall convince himself, through all available sources (including finished product testing in its appropriate environment) of the suitability of the products supplied for its own particular purpose. Because actual use of the products the user is beyond the control of SABIC INNOVATIVE PLASTICS HOLDING BV, its subsidiaries and affiliates, such use is in the exclusive responsibility of the user. SABIC INNOVATIVE PLASTICS HOLDING BV, its subsidiaries and affiliates cannot be held responsible respectively liable for any loss incurred through incorrect or faulty use of the products. Information, recommendations and/or advice are neither made to infringe on any patents, nor to grant a license under any patent or intellectual property right of SABIC INNOVATIVE PLASTICS HOLDING BV or any of its subsidiaries or affiliated companies, nor to grant the right to file for any patent protection

* Lexan is a trademark of SABIC Innovative Plastics IP BV

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

Lexan* Resin 123R

Europe-Africa-Middle East: COMMERCIAL

| PROCESSING PARAMETERS | TYPICAL VALUE | Unit |
|-----------------------------|---------------|------|
| Injection Molding | | |
| Drying Temperature | 120 | °C |
| Drying Time | 2 - 4 | hrs |
| Maximum Moisture Content | 0.02 | % |
| Melt Temperature | 280 - 300 | °C |
| Nozzle Temperature | 270 - 290 | °C |
| Front - Zone 3 Temperature | 280 - 300 | °C |
| Middle - Zone 2 Temperature | 270 - 290 | °C |
| Rear - Zone 1 Temperature | 260 - 280 | °C |
| Hopper Temperature | 60 - 80 | °C |
| Mold Temperature | 80 - 100 | °C |

(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 All information, recommendation or advice given SABIC INNOVATIVE PLASTICS HOLDING BV, or any of its subsidiaries, affiliates or authorized representatives, whether written or oral, is given in good faith, to the best of its knowledge and based on current procedures in effect. Each user of the products shall convince himself, through all available sources (including finished product testing in its appropriate environment) of the suitability of the products supplied for its own particular purpose. Because actual use of the products the user is beyond the control of SABIC INNOVATIVE PLASTICS HOLDING BV, its subsidiaries and affiliates, such use is in the exclusive responsibility of the user. SABIC INNOVATIVE PLASTICS HOLDING BV, its subsidiaries and affiliates cannot be held responsible respectively liable for any loss incurred through incorrect or faulty use of the products. Information, recommendations and/or advice are neither made to infringe on any patents, nor to grant a license under any patent or intellectual property right of SABIC INNOVATIVE PLASTICS HOLDING BV or any of its subsidiaries or affiliated companies, nor to grant the right to file for any patent protection

* Lexan is a trademark of SABIC Innovative Plastics IP BV

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