

Technical Data Sheet

Revision Date: 2017-04-22

NO.WHPU_0001

Name: CLARNATE® A1105 Polycarbonate Resin

Version: 2.0

General Information

| | | |
|--------------------------|--------------------|---------------|
| Features | •Medium Viscosity | •Easy Release |
| Uses | •General Purpose | |
| Appearance | •Clear/Transparent | |
| Forms | •Pellets | |
| Processing Method | •Injection Molding | |

Typical Properties

| Properties | Test Method | Test Condition | Unit | Typical Value |
|-------------------------------------|-------------|----------------|-------------------|---------------|
| Physical | | | | |
| Melt Mass-flow Rate | ASTM D1238 | 300°C/1.2Kg | g/10min | 9 |
| Mold Shrinkage | ASTM D955 | - | % | 0.5-0.7 |
| Water Absorption | ASTM D570 | 23°C,24h | % | 0.2 |
| Density | ASTM D792 | - | g/cm ³ | 1.2 |
| Mechanical | | | | |
| Stress at Break | ASTM D638 | 50mm/min | Mpa | 72 |
| Tensile Modulus | ASTM D638 | 1mm/min | Mpa | 2300 |
| Yield Stress | ASTM D638 | 50mm/min | Mpa | 65 |
| Yield Strain | ASTM D638 | 50mm/min | % | 6 |
| Strain at Break | ASTM D638 | 50mm/min | % | 120 |
| Flexural Strength | ASTM D790 | 2mm/min | Mpa | 97 |
| Flexural Modulus | ASTM D790 | 2mm/min | Mpa | 2300 |
| Izod Notched Impact Strength | ASTM D256 | 23°C | KJ/m ² | 80 |
| Thermal | | | | |
| Heat Distortion Temp. | ASTM D648 | 1.82MPa;3.2mm | °C | 130 |
| Vicat Softening Temp. | ASTM D1525 | 120°C/h;50N | °C | 150 |
| Optical | | | | |
| Haze | ASTM D1003 | 3mm | % | <0.8 |
| Light Transmittance | ASTM D1003 | 3mm | % | 89 |
| Refractive Index | ASTM D542 | - | - | 1.586 |
| Flammability | | | | |
| Flame Rating | UL 94 | 3mm | - | HB |
| Electrical | | | | |
| Relative Permittivity | IEC 60250 | 100Hz | - | 3.1 |

| | | | | |
|-----------------------------------|-------------|------------|------------------|-----------|
| | IEC 60250 | 1MHz | - | 3.0 |
| Dissipation Factor | IEC 60250 | 100Hz | 10^{-4} | 5 |
| | IEC 60250 | 1MHz | 10^{-4} | 90 |
| Volume Resistivity | IEC 60093 | - | $\Omega \cdot m$ | 10^{14} |
| Surface Resistivity | IEC 60093 | - | Ω | 10^{16} |
| Electric Strength | IEC 60243-1 | 1mm | KV/mm | 34 |
| Comparative Tracking Index | IEC 60112 | Solution A | V | 250 |

Processing Condition

| | | | |
|------------------------------|--|------|---------|
| Drying Temperature | | °C | 120 |
| Drying Time | | h | 5 |
| Injection Temperature | | °C | 280-310 |
| Mold temperature | | °C | 80 |
| Injection Speed | | mm/s | 50 |

For more information about safety and environment, please refer to our MSDS or contact our customer service center.

Version information:

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The information provided here is for reference only. The specification will be provided in the quality certificate or in the contract. It is the user's responsibility to test the material and its suitability for a process. We have no control over what another party does with the material and we cannot take any responsibility for another party's action. Nor will we be responsible for any indirect damages while using our products. The user is welcome to contact our customer and technical service center with questions on our products.