

# Reny® N252

Polyarylamide

Mitsubishi Engineering-Plastics Corp

## Message:

Reny® N252 is a Polyarylamide (PARA) material filled with 25% glass\mineral. It is available in Asia Pacific, Europe, or North America for injection molding. Important attributes of Reny® N252 are:

Flame Rated

Rigid

Typical application of Reny® N252: Automotive

| General Information                            |       |                                    |                        |             |
|------------------------------------------------|-------|------------------------------------|------------------------|-------------|
| UL YellowCard                                  |       | E41179-231793                      |                        |             |
| Filler / Reinforcement                         |       | Glass\Mineral,25% Filler by Weight |                        |             |
| Features                                       |       | High Rigidity                      |                        |             |
| Processing Method                              |       | Injection Molding                  |                        |             |
| Physical                                       | Dry   | Conditioned                        | Unit                   | Test Method |
| Density                                        | 1.72  | --                                 | g/cm <sup>3</sup>      | ISO 1183    |
| Melt Mass-Flow Rate (MFR)<br>(275°C/2.16 kg)   | 2.6   | --                                 | g/10 min               | ISO 1133    |
| Melt Volume-Flow Rate<br>(MVR) (275°C/2.16 kg) | 1.90  | --                                 | cm <sup>3</sup> /10min | ISO 1133    |
| Molding Shrinkage                              | 0.45  | --                                 | %                      |             |
| Water Absorption                               |       |                                    |                        | ISO 62      |
| Saturation, 23°C                               | 0.24  | --                                 | %                      |             |
| Equilibrium, 23°C, 50%<br>RH                   | 1.1   | --                                 | %                      |             |
| Mechanical                                     | Dry   | Conditioned                        | Unit                   | Test Method |
| Tensile Modulus                                | 25700 | 22200                              | MPa                    | ISO 527-2   |
| Tensile Stress (Break)                         | 174   | 138                                | MPa                    | ISO 527-2   |
| Tensile Strain (Break)                         | 11    | 1.4                                | %                      | ISO 527-2   |
| Flexural Modulus                               | 21900 | 17000                              | MPa                    | ISO 178     |
| Flexural Stress                                | 289   | 219                                | MPa                    | ISO 178     |
| Impact                                         | Dry   | Conditioned                        | Unit                   | Test Method |
| Charpy Notched Impact<br>Strength (23°C)       | 5.9   | 6.6                                | kJ/m <sup>2</sup>      | ISO 179     |
| Charpy Unnotched Impact<br>Strength (23°C)     | 31    | 33                                 | kJ/m <sup>2</sup>      | ISO 179     |
| Thermal                                        | Dry   | Conditioned                        | Unit                   | Test Method |
| Heat Deflection<br>Temperature                 |       |                                    |                        |             |
| 0.45 MPa, Unannealed                           | 236   | 231                                | °C                     | ISO 75-2/B  |
| 1.8 MPa, Unannealed                            | 227   | 220                                | °C                     | ISO 75-2/A  |
| CLTE                                           |       |                                    |                        | ISO 11359-2 |

|                             |               |                    |             |                    |
|-----------------------------|---------------|--------------------|-------------|--------------------|
| Flow                        | 2.0E-5        | --                 | cm/cm/°C    |                    |
| Transverse                  | 4.0E-5        | --                 | cm/cm/°C    |                    |
| <b>Electrical</b>           | <b>Dry</b>    | <b>Conditioned</b> | <b>Unit</b> | <b>Test Method</b> |
| Surface Resistivity         | 4.0E+15       | 2.0E+14            | ohms        | IEC 60093          |
| Volume Resistivity          | 6.0E+15       | 7.0E+14            | ohms·cm     | IEC 60093          |
| Electric Strength (1.00 mm) | 21            | 20                 | kV/mm       | IEC 60243-1        |
| Relative Permittivity       |               |                    |             | IEC 60250          |
| 100 Hz                      | 5.00          | 5.00               |             |                    |
| 1 MHz                       | 5.00          | 5.00               |             |                    |
| Dissipation Factor          |               |                    |             | IEC 60250          |
| 100 Hz                      | 0.011         | 0.011              |             |                    |
| 1 MHz                       | 8.0E-3        | 0.018              |             |                    |
| Comparative Tracking Index  | 325           | 250                | V           | IEC 60112          |
| <b>Flammability</b>         | <b>Dry</b>    | <b>Conditioned</b> | <b>Unit</b> | <b>Test Method</b> |
| Flame Rating (1.60 mm)      | HB            | --                 |             | UL 94              |
| <b>Injection</b>            | <b>Dry</b>    | <b>Unit</b>        |             |                    |
| Drying Temperature          |               |                    |             |                    |
| A                           | 120           |                    | °C          |                    |
| B                           | 80.0          |                    | °C          |                    |
| Drying Time                 |               |                    |             |                    |
| A                           | > 3.0         |                    | hr          |                    |
| B                           | > 12          |                    | hr          |                    |
| Rear Temperature            | 270           |                    | °C          |                    |
| Middle Temperature          | 275           |                    | °C          |                    |
| Front Temperature           | 280           |                    | °C          |                    |
| Nozzle Temperature          | 280           |                    | °C          |                    |
| Mold Temperature            | 120 to 140    |                    | °C          |                    |
| Injection Pressure          | 20.0 to 150   |                    | MPa         |                    |
| Injection Rate              | Moderate-Fast |                    |             |                    |
| Screw Speed                 | 60 to 150     |                    | rpm         |                    |

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