

## Properties

### VGR10

Glass fiber-reinforced ABS resin (GF10%, UL94 HB)

| Properties                              | Test methods | Test conditions | Units       |         |
|-----------------------------------------|--------------|-----------------|-------------|---------|
| Mold shrinkage                          | ASTM D955    | -               | %           | 0.2-0.5 |
| Tensile strength                        | ISO 527      | -               | MPa         | 80      |
| Flexural strength                       | ISO 178      | -               | MPa         | 110     |
| Flexural modulus                        | ISO 178      | -               | MPa         | 4800    |
| Notched Charpy impact strength          | ISO 179/1eA  | 23 deg C        | kJ/m2       | 10      |
| Notched Charpy impact strength          | ISO 179/1eA  | -30 deg C       | kJ/m2       | 6       |
| Notched Izod impact strength            | ASTM D256    | 23 deg C/6.4mm  | J/m         | 120     |
| Notched Izod impact strength            | ASTM D256    | -30 deg C/6.4mm | J/m         | 40      |
| Rockwell hardness                       | ISO 2039     | -               | -           | R115    |
| Deflection temperature under load       | ISO 75       | 1.80MPa         | deg C       | 96      |
| Deflection temperature under load       | ASTM D648    | 1.82MPa/12.7mm  | deg C       | 104     |
| Vicat softening temperature             | ISO 306/B50  | 50N X 50deg C/h | deg C       | 99      |
| Ball pressure temperature               | -            | -               | deg C       | 90      |
| Coefficient of linear thermal expansion | ISO 11359    | MD              | X1E-5/deg C | 5       |
| Coefficient of linear thermal expansion | ISO 11359    | TD              | X1E-5/deg C | 8       |
| Flammability                            | UL94         | -               | -           | HB      |
| Water absorption                        | ISO 62       | -               | %           | 0.3     |
| Density                                 | ISO 1183     | -               | g/cm3       | 1.11    |

Note

- Values are typical, not quality assured.
- UL recognition File No. of Daicel Polymer is E47773.

### Typical settings for processing

| Preliminary drying   | Barrel temperature(deg C) |         |         |         | Screw rotation (rpm) | Back pressure (MPa) | Mold temperature (deg C) |
|----------------------|---------------------------|---------|---------|---------|----------------------|---------------------|--------------------------|
|                      | Nozzle                    | Front   | Middle  | Back    |                      |                     |                          |
| 3-5hrs<br>80-85deg C | 230-250                   | 230-250 | 210-230 | 190-210 | 40-60                | 10-20               | 60-80                    |