

## Properties

### **VF512**

Flame retardant flame-retardant ABS resin (UL94 V-2)

Standard

| Properties                              | Test methods | Test conditions | Units             |           |
|-----------------------------------------|--------------|-----------------|-------------------|-----------|
| Melt mass-flow rate                     | ISO 1133     | 220 deg C/10kg  | g/10min           | 35        |
| Mold shrinkage                          | ASTM D955    | -               | %                 | 0.4-0.6   |
| Tensile strength                        | ISO 527      | -               | MPa               | 46        |
| Flexural strength                       | ISO 178      | -               | MPa               | 78        |
| Flexural modulus                        | ISO 178      | -               | MPa               | 2500      |
| Notched Charpy impact strength          | ISO 179/1eA  | 23 deg C        | kJ/m <sup>2</sup> | 18        |
| Notched Charpy impact strength          | ISO 179/1eA  | -30 deg C       | kJ/m <sup>2</sup> | 9         |
| Notched Izod impact strength            | ASTM D256    | 23 deg C/6.4mm  | J/m               | 180       |
| Notched Izod impact strength            | ASTM D256    | -30 deg C/6.4mm | J/m               | 80        |
| Rockwell hardness                       | ISO 2039     | -               | -                 | R112      |
| Deflection temperature under load       | ISO 75       | 1.80MPa         | deg C             | 73        |
| Deflection temperature under load       | ASTM D648    | 1.82MPa/12.7mm  | deg C             | 85        |
| Vicat softening temperature             | ISO 306/B50  | 50N X 50deg C/h | deg C             | 89        |
| Ball pressure temperature               | -            | -               | deg C             | 80        |
| Coefficient of linear thermal expansion | ISO 11359    | MD              | X1E-5/deg C       | 8         |
| Coefficient of linear thermal expansion | ISO 11359    | TD              | X1E-5/deg C       | -         |
| Flammability                            | UL94         | -               | -                 | V-2/1.5mm |
| Dielectric strength                     | ASTM D149    | 1.5mm           | MV/m              | 33        |
| Arc resistance                          | ASTM D495    | 3.0mm           | sec(PLC)          | 36(7)     |
| Water absorption                        | ISO 62       | -               | %                 | 0.3       |
| Density                                 | ISO 1183     | -               | g/cm <sup>3</sup> | 1.10      |

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    |                      |                     |                          |
| 3-4hrs<br>70-80deg C | 185-195                   | 185-195 | 170-180 | 160-170 | 40-60                | 5-15                | 40-60                    |