

# PRODUCT INFORMATION

Metric & SI unit

Acetal Copolymer  
**KEPITAL®**

KOREA ENGINEERING PLASTICS CO.,LTD.

**FL2020**

A medium-high viscosity grade for general injection molding. It was modified with 20% PTFE powder, and so suitable for parts requiring low wear and friction.

| Property                                                                 | Test Method | Units                                                    | Value                |
|--------------------------------------------------------------------------|-------------|----------------------------------------------------------|----------------------|
| <b>Physical</b>                                                          |             |                                                          |                      |
| Specific Gravity                                                         | ASTM D792   | —                                                        | 1.51                 |
| Water Absorption 23℃, 60%RH                                              | ASTM D570   | %                                                        | 0.18                 |
| <b>Thermal</b>                                                           |             |                                                          |                      |
| Melt Index 190℃, 2.16 kg                                                 | ASTM D1238  | g/10min                                                  | 5                    |
| Melting Point 10℃/min                                                    | ASTM D3418  | ℃                                                        | 165                  |
| Heat Deflection Temperature 4.6kg <sub>f</sub> /cm <sup>2</sup> (0.5MPa) | ASTM D648   | ℃                                                        | 95                   |
| 18.6kg <sub>f</sub> /cm <sup>2</sup> (1.8MPa)                            |             |                                                          | 13                   |
| Coeff. of Linear Thermal Expansion 20~80℃                                | ASTM D696   | x 10 <sup>-5</sup> cm/cm/℃                               | 13                   |
| Flammability t 0.8mm                                                     | UL94        | —                                                        | HB                   |
| <b>Mechanical</b>                                                        |             |                                                          |                      |
| Tensile Strength 23℃                                                     | ASTM D638   | kg <sub>f</sub> /cm <sup>2</sup> (MPa)                   | 445 (44)             |
| Tensile Elongation 23℃                                                   | ASTM D638   | %                                                        | 20                   |
| Flexural Strength 23℃                                                    | ASTM D790   | kg <sub>f</sub> /cm <sup>2</sup> (MPa)                   | 665 (65)             |
| Flexural Modulus 23℃                                                     | ASTM D790   | x 10 <sup>4</sup> kg <sub>f</sub> /cm <sup>2</sup> (MPa) | 2.14 (2,100)         |
| Shear Strength t 2mm                                                     | ASTM D732   | kg <sub>f</sub> /cm <sup>2</sup> (MPa)                   | 3.8 (37)             |
| Notched Izod Impact Strength t 3.2mm                                     | ASTM D256   | kg <sub>f</sub> · cm/cm (J/m)                            | M70                  |
| Rockwell Hardness M scale                                                | ASTM D785   | —                                                        |                      |
| <b>Electrical</b>                                                        |             |                                                          |                      |
| Dielectric Constant 10 <sup>6</sup> Hz                                   | ASTM D150   | —                                                        | 3.1                  |
| Dielectric Dissipation Factor 10 <sup>6</sup> Hz                         | ASTM D150   | —                                                        | 0.009                |
| Surface Resistivity                                                      | ASTM D257   | Ω                                                        | 1 x 10 <sup>16</sup> |
| Volume Resistivity                                                       | ASTM D257   | Ω · cm                                                   | 1 x 10 <sup>14</sup> |
| Dielectric Strength                                                      | ASTM D149   | kV/mm                                                    | 16                   |
| Molding Shrinkage (//Direction) t 3mm, Φ 100mm                           |             | %                                                        | 2.1                  |



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| Property                           | Test Method | Units                                                               | Value              |
|------------------------------------|-------------|---------------------------------------------------------------------|--------------------|
| <b>Physical</b>                    |             |                                                                     |                    |
| Specific Gravity                   | ASTM D792   | —                                                                   | 1.51               |
| Water Absorption                   | ASTM D570   | %                                                                   | 0.18               |
| <b>Thermal</b>                     |             |                                                                     |                    |
| Melt Index                         | ASTM D1238  | g/10min                                                             | 5                  |
| Melting Point                      | ASTM D3418  | °C (°F)                                                             | 165 (329)          |
| Heat Deflection Temperature        | ASTM D648   | °C (°F)                                                             | 95 (203)           |
| Coeff. of Linear Thermal Expansion | ASTM D696   | $\times 10^{-5}$ cm/cm/°C                                           | 13                 |
| Flammability                       | UL94        | —                                                                   | HB                 |
| <b>Mechanical</b>                  |             |                                                                     |                    |
| Tensile Strength                   | ASTM D638   | kg <sub>f</sub> /cm <sup>2</sup> (psi)                              | 445 (6,300)        |
| Tensile Elongation                 | ASTM D638   | %                                                                   | 20                 |
| Flexural Strength                  | ASTM D790   | kg <sub>f</sub> /cm <sup>2</sup> ( $\times 10^3$ psi)               | 665 (9.5)          |
| Flexural Modulus                   | ASTM D790   | $\times 10^4$ kg <sub>f</sub> /cm <sup>2</sup> ( $\times 10^4$ psi) | 2.14 (30.4)        |
| Shear Strength                     | ASTM D732   | kg <sub>f</sub> /cm <sup>2</sup> (psi )                             | 3.8 (0.7)          |
| Notched Izod Impact Strength       | ASTM D256   | kg <sub>f</sub> · cm/cm(ft · lb/in)                                 | M70                |
| Rockwell Hardness                  | ASTM D785   | —                                                                   |                    |
| <b>Electrical</b>                  |             |                                                                     |                    |
| Dielectric Strength                | ASTM D150   | —                                                                   | 3.1                |
| Dielectric Dissipation Factor      | ASTM D150   | —                                                                   | 0.009              |
| Surface Resistivity                | ASTM D257   | Ω                                                                   | $1 \times 10^{16}$ |
| Volume Resistivity                 | ASTM D257   | Ω · cm                                                              | $1 \times 10^{14}$ |
| Dielectric Strength                | ASTM D149   | kV/mm                                                               | 16                 |
| Molding Shrinkage (//Direction)    |             | %                                                                   | 2.1                |

