

# KOCETAL® K300

Polyacetal, General Purpose, Injection Molding, Medium-Viscosity

| Properties                          | Measurement condition | Test Method | Unit                   | Typical value |
|-------------------------------------|-----------------------|-------------|------------------------|---------------|
| <b>Physical</b>                     |                       |             |                        |               |
| Density                             |                       | ISO 1183    | g/cm <sup>3</sup>      | 1.41          |
| Melt flow rate                      | 190 °C, 2.16 kg       | ISO 1133    | g/10min                | 9.5           |
| Melt volume rate                    | 190 °C, 2.16 kg       | ISO 1133    | cm <sup>3</sup> /10min | 8.5           |
| Molding shrinkage                   | Parallel              | ISO 294-4   | %                      | 1.8 ~ 2.0     |
|                                     | Normal                |             |                        | 1.8 ~ 2.0     |
| Water absorption                    | 23 °C, 50% RH         | ISO 62      | %                      | 0.22          |
| <b>Mechanical</b>                   |                       |             |                        |               |
| Tensile strength at yield           | 50 mm/min             | ISO 527     | MPa                    | 64            |
| Tensile strain at yield             | 50 mm/min             | ISO 527     | %                      | 11            |
| Nominal strain at break             | 50 mm/min             | ISO 527     | %                      | 30            |
| Flexural strength                   | 2 mm/min              | ISO 178     | MPa                    | 85            |
| Flexural modulus                    | 2 mm/min              | ISO 178     | MPa                    | 2,500         |
| Charpy impact strength<br>(Notched) | 23°C                  | ISO 179/1eA | kJ/m <sup>2</sup>      | 7.0           |
|                                     | -30°C                 |             |                        | 5.5           |
| Rockwell hardness                   | M scale               | ISO 2039-2  | -                      | 80            |
| <b>Thermal</b>                      |                       |             |                        |               |
| Melting temperature                 | 20 °C/min             | ISO 11357-1 | °C                     | 167           |
| Heat deflection temperature         | 1.8 MPa               | ISO 75      | °C                     | 95            |
| Coeff. of linear thermal expansion  |                       | ISO 11359   | × 10 <sup>-5</sup> /°C |               |
| Flammability                        |                       | UL 94       | Class                  | HB            |
| <b>Electrical</b>                   |                       |             |                        |               |
| Dielectric strength                 |                       | IEC 60243   | kV/mm                  |               |
| Volume resistivity                  |                       | IEC 60093   | Ω·cm                   |               |
| Surface resistivity                 |                       | IEC 60093   | Ω                      |               |

The values of each item in this document provide general information about the product and may be different from actual ones as reference dimensions for customer's convenience of material selection. This information cannot be viewed as a Certificate of Analysis(COA) issued by the Company to customers, nor can it be used as a basis for legal disputes such as lawsuits. The value of each item cannot be compared with the measurement result of other environment, equipment and method because it is measured under the specific condition using the existing measurement equipment and external authorized agency equipment. The characteristics described above are subject to change, and you are solely responsible for the determination and use of this product. In addition, these materials do not apply when adding pigments and other additives to the product depending on the customer's purpose of use. The value of the shrinkage factor in the above data is the value measured under the specific injection condition using our standard test piece and may be changed according to other test piece (product) and condition. Therefore, it is the customer's responsibility to apply the correction by considering the required characteristics of the molded product, the mold design condition, the product shape, the injection conditions, etc. Even if there is a difference in the shrinkage rate of the product in the mold manufactured by applying this shrinkage ratio, we also assume no guarantee or liability.

## Processing Guide (Injection Molding)

|                                 |                            |                           |                            |                          |
|---------------------------------|----------------------------|---------------------------|----------------------------|--------------------------|
| Drying Temperature(°C)          | 80 ~ 90                    | (Dehumidifying Dryer)     |                            |                          |
| Drying Time(hr)                 | 3 ~ 5                      |                           |                            |                          |
| Processing Moisture Contents(%) | ≤ 0.1                      |                           |                            |                          |
| Cylinder Temperature(°C)        | <b>Nozzle</b><br>180 ~ 200 | <b>Front</b><br>180 ~ 200 | <b>Middle</b><br>170 ~ 190 | <b>Rear</b><br>160 ~ 180 |
| Mold Temperature(°C)            | 60 ~ 100                   |                           |                            |                          |

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