



# KOCETAL® GF705

Polyacetal + Glass Fiber, Reinforced, Injection Molding, Medium Viscosity

| Properties                        | Measurement condition          | Test Method | Unit                          | Typical value |
|-----------------------------------|--------------------------------|-------------|-------------------------------|---------------|
| <b>Physical</b>                   |                                |             |                               |               |
| Density                           |                                | ASTM D792   | –                             | 1.58          |
| Melt Flow Index                   | 190 °C, 2.16 kg                | ASTM D1238  | g/10min                       | 10.0          |
| Shrinkage                         |                                | ASTM D955   | %                             | 0.5–1.1       |
| Water Absorption                  | 23 °C, H <sub>2</sub> O, 24 hr | ASTM D570   | %                             | 0.2           |
| <b>Mechanical</b>                 |                                |             |                               |               |
| Tensile Strength at Yield (3.2mm) | 5 mm/min                       | ASTM D638   | MPa                           | 130           |
| Nominal Strain at Break(3.2mm)    | 5 mm/min                       | ASTM D638   | %                             | –             |
| Flexural Strength (3.2mm)         | 10 mm/min                      | ASTM D790   | MPa                           | 200           |
| Flexural Modulus (3.2mm)          | 10 mm/min                      | ASTM D790   | MPa                           | 8,000         |
| Izod Impact Strength (6.4mm)      |                                | ASTM D256   |                               |               |
| (Notched)                         | 23 °C                          |             | J/m                           | 70            |
|                                   | –30 °C                         |             | J/m                           | –             |
| Rockwell Hardness                 | M scale                        | ASTM D785   | –                             | 90            |
| <b>Thermal</b>                    |                                |             |                               |               |
| Melting Point                     | 20 °C/min                      | ASTM D1525  | °C                            | 167           |
| Heat Deflection Temperature       | 1.8 MPa                        | ASTM D648   | °C                            | >160          |
| Coefficient of linear expansion   |                                | ASTM D696   | × 10 <sup>–5</sup> cm/cm · °C | 2.5           |
| Flammability (0.8mm)              |                                | UL94        | Class                         | HB            |
| <b>Electrical</b>                 |                                |             |                               |               |
| Dielectric Strength               |                                | IEC 60243   | kV/mm                         | –             |
| Volume Resistivity                |                                | IEC 60093   | Ω · cm                        | –             |
| Surface Resistivity               |                                | IEC 60093   | Ω/sq                          | –             |

※ 1Mpa = 10.197162 Kgf/cm<sup>2</sup>, 1J/m = 0.10197 Kgf · cm/cm, ( Test specimen Thickness )

Updated: 27/Oct/2020

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(℃)           | 80 ~ 90   | (Dehumidifying Dryer) |           |           |
| Drying Time(hr)                 | 3 ~ 5     |                       |           |           |
| Processing Moisture Contents(%) | ≤ 0.1     |                       |           |           |
| Cylinder Temperature(℃)         | Nozzle    | Front                 | Middle    | Rear      |
|                                 | 190 ~ 210 | 190 ~ 210             | 180 ~ 200 | 170 ~ 190 |
| Mold Temperature(℃)             | 70 ~ 120  |                       |           |           |

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