

## POKETONE® M93FC1G

### Description

Conductive injection molding grade

| Physical Properties                    | ASTM     | Value                  | ISO   | Value |
|----------------------------------------|----------|------------------------|-------|-------|
| Density                                | D792     | 1.34 g/cm <sup>3</sup> | 1183  |       |
| Shore D hardness                       | D2240    |                        | 868   |       |
| Hardness Rockwell                      | D785     |                        | 2039  |       |
| Water absorption equilibrium at RH 50% | D570     |                        | 62    |       |
| Water absorption at Saturation         | D570     |                        | 62    |       |
| Melt flow index 240°C/2.16kg           | D1238    | 4.4 g/10 min           | 1133  |       |
| Mold Shrinkage                         | D955     |                        | 294-4 |       |
|                                        | MD, 3 mm |                        |       |       |
|                                        | TD, 3 mm |                        |       |       |
|                                        | MD, 2 mm |                        |       |       |
|                                        | TD, 2 mm |                        |       |       |

| Mechanical Properties            | ASTM  | Value                 | ISO     | Value                 |
|----------------------------------|-------|-----------------------|---------|-----------------------|
| Tensile strength at yield        | D638  | 101 MPa               | 527-1   | 101 MPa               |
| Tensile modulus                  | D638  |                       | 527-1   |                       |
| Tensile elongation at yield      | D638  |                       | 527-1   |                       |
| Tensile elongation at break      | D638  | 3.2 %                 | 527-1   | 3.2 %                 |
| Flexural strength                | D790  | 147 MPa               | 178     | 147 MPa               |
| Flexural modulus                 | D790  | 5,360 MPa             | 178     | 5,360 MPa             |
| Unnotched Izod impact strength   | D256  |                       | 180/1U  |                       |
| Notched Izod impact strength     | D256  |                       | 180/1A  |                       |
| Unnotched Charpy impact strength | D6110 |                       | 179/1eU |                       |
| Notched Charpy impact strength   | D6110 | 8.5 kJ/m <sup>2</sup> | 179/1eA | 8.5 kJ/m <sup>2</sup> |
| Falling dart impact strength     |       |                       | 6603-2  |                       |

| Thermal Properties                      | ASTM      | Value  | ISO      | Value  |
|-----------------------------------------|-----------|--------|----------|--------|
| Melting temperature                     | D3418     | 222 °C | 11357    | 222 °C |
| Coefficient of linear thermal expansion | E831      |        | 11359    |        |
|                                         | 25 ~ 55°C |        |          |        |
| Vicat softening point                   | D1525     |        | 306/B50  |        |
|                                         | 5 kg      |        | 50 N     |        |
| Heat deflection temperature             | D648      |        | 75       |        |
|                                         | 66 psi    |        | 0.45 MPa |        |
|                                         | 264 psi   |        | 1.8 MPa  |        |

## Electrical Properties

|                             | Test Method & Condition | Value                       |
|-----------------------------|-------------------------|-----------------------------|
| Dielectric Strength (DS)    | ASTM D149               |                             |
| Volume Resistivity (VR)     | ASTM D257               |                             |
| Surface Resistivity (SR)    | ASTM D257               | $10^{-6} \Omega/\text{m}^2$ |
| Dielectric constant at 60Hz | ASTM D150               |                             |
| Dissipation factor at 60Hz  | ASTM D150               |                             |

## Injection Molding Processing Conditions

|             | Value                  |
|-------------|------------------------|
| Pre-drying  | Drying temperature     |
|             | 80 °C                  |
|             | Drying time            |
|             | 3 ~ 4 hr               |
|             | Suggested max moisture |
|             | 0.20 %                 |
| Temperature | Nozzle temperature     |
|             | 240 °C                 |
|             | Zone 1 temperature     |
|             | 230 °C                 |
|             | Zone 2 temperature     |
|             | 220 °C                 |
|             | Zone 3 temperature     |
|             | 215 °C                 |
|             | Zone 4 temperature     |
|             | 210 °C                 |
|             | Processing temperature |
|             | 225 ~ 240 °C           |
|             | Mold temperature       |
|             | 60 ~ 80 °C             |
| Pressure    | Back pressure          |
|             | 0.294 ~ 0.686 MPa      |
| Speed       | Screw Speed            |
|             | 50 ~ 100 rpm           |

\* The data listed here is not for specification warranty, but typical value.

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