

# POKETONE® M33FG8A

## General

|                         |                                                             |
|-------------------------|-------------------------------------------------------------|
| Feature                 | 40% Glass-reinforced injection molding grade                |
| Special Characteristics | Non-toxic, Low GWP, High impact                             |
| Processing method       | Injection molding                                           |
| Certification           | FDA, NSF61, WRAS, RoHs, Free of PAHs, Free of Halogen, SVHC |
| Colors available        | Natural, Black                                              |
| UL File number          | -                                                           |
| Form                    | Pellet                                                      |
| Applications            | Pump housing                                                |

## Physical Properties

|                                        | ASTM     | Value                  | ISO   | Value                  |
|----------------------------------------|----------|------------------------|-------|------------------------|
| Density                                | D792     | 1.57 g/cm <sup>3</sup> | 1183  | 1.57 g/cm <sup>3</sup> |
| 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    | 10 g/10 min            | 1133  |                        |
|                                        | 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  | 142 MPa   | 527-1   |                      |
| Tensile modulus                  | D638  |           | 527-1   |                      |
| Tensile elongation at yield      | D638  |           | 527-1   |                      |
| Tensile elongation at break      | D638  | 2.7 %     | 527-1   |                      |
| Flexural strength                | D790  | 200 MPa   | 178     |                      |
| Flexural modulus                 | D790  | 9,000 MPa | 178     |                      |
| 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 |           | 179/1eA | 13 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,<br>25 ~ 55°C | E831    |        | 11359    |        |
| 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  |        |

| 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       | 80 ~ 120 °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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