

# FORMOCON® FM090

Acetal (POM) Copolymer

Formosa Plastics Corporation

## Message:

Characteristics: Standard flow, minimal mould

Application: Buttons and press in fasteners, Plumbing and hardware, Gears, Electronic parts, Automotive parts, Household, Bearing, Other injection parts.

Also known as FORMOSACON

| General Information                         |                                    |                   |             |
|---------------------------------------------|------------------------------------|-------------------|-------------|
| UL YellowCard                               | E173318-226133                     |                   |             |
| Features                                    | Good Flow                          |                   |             |
| Uses                                        | Automotive Applications            |                   |             |
|                                             | Bearings                           |                   |             |
|                                             | Buttons                            |                   |             |
|                                             | Electrical/Electronic Applications |                   |             |
|                                             | Household Goods                    |                   |             |
| Forms                                       | Pellets                            |                   |             |
| Physical                                    | Nominal Value                      | Unit              | Test Method |
| Specific Gravity                            | 1.41                               | g/cm <sup>3</sup> | ASTM D792   |
| Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)   | 9.0                                | g/10 min          | ASTM D1238  |
| Molding Shrinkage - Flow (3.00 mm)          | 1.8 to 2.2                         | %                 | ASTM D955   |
| Water Absorption (Equilibrium, 23°C, 69%RH) | 0.22                               | %                 | ASTM D570   |
| Hardness                                    | Nominal Value                      | Unit              | Test Method |
| Rockwell Hardness                           |                                    |                   | ASTM D785   |
| M-Scale                                     | 80                                 |                   |             |
| R-Scale                                     | 115                                |                   |             |
| Mechanical                                  | Nominal Value                      | Unit              | Test Method |
| Tensile Strength (Yield)                    | 60.8                               | MPa               | ASTM D638   |
| Tensile Elongation (Break)                  | 60                                 | %                 | ASTM D638   |
| Flexural Modulus                            | 2550                               | MPa               | ASTM D790   |
| Flexural Strength                           | 93.2                               | MPa               | ASTM D790   |
| Compressive Strength                        |                                    |                   | ASTM D695   |
| 1% Strain                                   | 31.4                               | MPa               |             |
| 10% Strain                                  | 108                                | MPa               |             |
| Impact                                      | Nominal Value                      | Unit              | Test Method |
| Notched Izod Impact (23°C)                  | 64                                 | J/m               | ASTM D256   |
| Thermal                                     | Nominal Value                      | Unit              | Test Method |
| Deflection Temperature Under Load           |                                    |                   | ASTM D648   |

| 0.45 MPa, Unannealed                   | 158           | °C       |             |
|----------------------------------------|---------------|----------|-------------|
| 1.8 MPa, Unannealed                    | 110           | °C       |             |
| Vicat Softening Temperature            | 162           | °C       | ASTM D1525  |
| Melting Temperature                    | 165           | °C       | DSC         |
| CLTE - Flow                            | 8.5E-5        | cm/cm/°C | ASTM D696   |
| Electrical                             | Nominal Value | Unit     | Test Method |
| Surface Resistivity <sup>1</sup>       | 1.0E+16       | ohms     | ASTM D257   |
| Volume Resistivity <sup>2</sup> (23°C) | 1.0E+14       | ohms·cm  | ASTM D257   |
| Dielectric Strength (2.00 mm)          | 24            | kV/mm    | ASTM D149   |
| Dielectric Constant                    |               |          | IEC 60250   |
| 50 Hz                                  | 3.80          |          |             |
| 1 kHz                                  | 3.80          |          |             |
| 1 MHz                                  | 3.80          |          |             |
| Flammability                           | Nominal Value | Unit     | Test Method |
| Flame Rating                           | HB            |          | UL 94       |
| NOTE                                   |               |          |             |
| 1.                                     | 50%RH         |          |             |
| 2.                                     | 50%RH         |          |             |

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