

# Sumitomo Phenolic FM 4017F

Phenolic

Sumitomo Bakelite North America, Inc.

Message:

FM 4017F is a fiberglass and mineral reinforced phenolic molding compound, with excellent dimensional stability and good strength at elevated temperatures.

| General Information                             |                            |                   |             |
|---|----------------------------|-------------------|-------------|
| UL YellowCard                                   | E123472-221435             |                   |             |
| Filler / Reinforcement                          | Glass Fiber                |                   |             |
|   | Mineral                    |                   |             |
| Features  | Good Dimensional Stability |                   |             |
|   | High Temperature Strength  |                   |             |
| Appearance                                      | Black                      |                   |             |
|   | Green                      |                   |             |
| Forms   | Granules                   |                   |             |
| Processing Method                               | Compression Molding        |                   |             |
|   | Injection Molding          |                   |             |
|   | Resin Transfer Molding     |                   |             |
| Physical  | Nominal Value              | Unit              | Test Method |
| Specific Gravity                                | 1.81                       | g/cm <sup>3</sup> | ASTM D792   |
| Apparent Density                                | 0.80                       | g/cm <sup>3</sup> | ASTM D1895  |
| Molding Shrinkage - Flow (Compression Molded)   | 0.20                       | %                 | ASTM D955   |
| Water Absorption (24 hr)                        | 0.070                      | %                 | ASTM D570   |
| Water Absorption - 48 hr                        | 0.15                       | %                 | ASTM D570   |
| Hardness  | Nominal Value              | Unit              | Test Method |
| Rockwell Hardness (E-Scale, Compression Molded) | 125                        |                   | ASTM D785   |
| Mechanical                                      | Nominal Value              | Unit              | Test Method |
| Tensile Strength (Compression Molded)           | 72.0                       | MPa               | ASTM D638   |
| Flexural Modulus (Compression Molded)           | 15000                      | MPa               | ASTM D790   |
| Flexural Strength (Compression Molded)          | 135                        | MPa               | ASTM D790   |
| Compressive Strength                            | 285                        | MPa               | ASTM D695   |
| Impact  | Nominal Value              | Unit              | Test Method |
| Notched Izod Impact (Compression Molded)        | 38                         | J/m               | ASTM D256A  |

| Thermal                                 | Nominal Value           | Unit     | Test Method |
|---|-------------------------|----------|-------------|
| Deflection Temperature Under Load       |                         |          | ASTM D648   |
| 1.8 MPa, Unannealed, Compression Molded | 190                     | °C       |             |
| 1.8 MPa, Annealed, Compression Molded   | > 282                   | °C       |             |
| CLTE - Flow                             | 1.9E-5                  | cm/cm/°C | ASTM E831   |
| RTI Elec                                | 150                     | °C       | UL 746      |
| RTI Imp                                 | 150                     | °C       | UL 746      |
| RTI Str                                 | 150                     | °C       | UL 746      |
| Electrical                              | Nominal Value           | Unit     | Test Method |
| Dielectric Strength <sup>1</sup>        |                         |          | ASTM D149   |
| -- <sup>2</sup>                         | 15                      | kV/mm    |             |
| -- <sup>3</sup>                         | 14                      | kV/mm    |             |
| Arc Resistance                          | 180                     | sec      | ASTM D495   |
| Flammability                            | Nominal Value           | Unit     | Test Method |
| Flame Rating                            |                         |          | UL 94       |
| 1.60 mm                                 | V-0                     |          |             |
| 3.20 mm                                 | V-0                     |          |             |
| NOTE                                    |                         |          |             |
| 1.                                      | Wet, 60 Hz              |          |             |
| 2.                                      | Method A (Short-Time)   |          |             |
| 3.                                      | Method B (Step-by-Step) |          |             |

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

#### Recommended distributors for this material

### Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

