

# Sumikon® PM-9630K

Phenolic

Sumitomo Bakelite Co., Ltd.

## Message:

Sumikon® PM-9630K is a phenolic (Phenolic) product. It can be processed by injection molding and is available in North America or Asia Pacific.

Sumikon® PM-9630K applications include electrical/electronic applications and the automotive industry.

Features include:

flame retardant/rated flame

high strength

Heat resistance

| General Information         |                                                          |                   |             |
|-----------------------------|----------------------------------------------------------|-------------------|-------------|
| Features                    | High strength<br>Heat resistance, high                   |                   |             |
| Uses                        | Electrical components<br>Application in Automobile Field |                   |             |
| Forms                       | Particle                                                 |                   |             |
| Processing Method           | Injection molding                                        |                   |             |
| Physical                    | Nominal Value                                            | Unit              | Test Method |
| Specific Gravity            |                                                          |                   |             |
| --                          | 1.80                                                     | g/cm <sup>3</sup> | ASTM D792   |
| --                          | 1.82                                                     | g/cm <sup>3</sup> | ISO 1183    |
| Molding Shrinkage           |                                                          |                   |             |
| Flow                        | 0.35                                                     | %                 | ASTM D955   |
| --                          | 0.30 - 0.50                                              | %                 | ISO 294-4   |
| Water Absorption            |                                                          |                   |             |
| 24 hr                       | 0.060                                                    | %                 | ASTM D570   |
| 23°C, 24 hr                 | 0.20                                                     | %                 | ISO 62      |
| Hardness                    | Nominal Value                                            | Unit              | Test Method |
| Rockwell Hardness (M-Scale) | 115                                                      |                   | ISO 2039-2  |
| Mechanical                  | Nominal Value                                            | Unit              | Test Method |
| Tensile Modulus             | 20000                                                    | MPa               | ASTM D638   |
| Tensile Strength            | 100                                                      | MPa               | ASTM D638   |
| Tensile Elongation (Break)  | 0.50                                                     | %                 | ASTM D638   |
| Flexural Modulus (23°C)     | 18000                                                    | MPa               | ASTM D790   |
| Flexural Strength           |                                                          |                   |             |
| 23°C                        | 170                                                      | MPa               | ASTM D790   |
| --                          | 185                                                      | MPa               | ISO 178     |
| Compressive Stress          | 255 - 295                                                | MPa               | ISO 604     |
| Impact                      | Nominal Value                                            | Unit              | Test Method |

|                                                         |                      |                   |                       |
|---------------------------------------------------------|----------------------|-------------------|-----------------------|
| Charpy Notched Impact Strength                          | 4.5                  | kJ/m <sup>2</sup> | ISO 179               |
| Notched Izod Impact                                     | 40                   | J/m               | ASTM D256             |
| <b>Thermal</b>                                          | <b>Nominal Value</b> | <b>Unit</b>       | <b>Test Method</b>    |
| Deflection Temperature Under Load (1.8 MPa, Unannealed) | 300                  | °C                | ASTM D648, ISO 75-2/A |
| Linear thermal expansion coefficient                    |                      |                   |                       |
| Flow                                                    | 1.8E-5               | cm/cm/°C          | ASTM D696             |
| Flow                                                    | 2.3E-5               | cm/cm/°C          | ISO 11359-2           |
| Lateral                                                 | 2.0E-5               | cm/cm/°C          | ASTM D696             |
| <b>Electrical</b>                                       | <b>Nominal Value</b> | <b>Unit</b>       | <b>Test Method</b>    |
| Volume Resistivity                                      | 1.0E+13              | ohms·cm           | ASTM D257             |
| Dielectric Strength                                     |                      |                   |                       |
| --                                                      | 10                   | kV/mm             | ASTM D149             |
| --                                                      | 12                   | kV/mm             | IEC 60243-1           |
| Arc Resistance                                          | 182                  | sec               | ASTM D495             |
| Comparative Tracking Index                              | 200                  | V                 | IEC 60112             |
| <b>Flammability</b>                                     | <b>Nominal Value</b> | <b>Unit</b>       | <b>Test Method</b>    |
| Flame Rating (0.380 mm)                                 | V-0                  |                   | UL 94                 |
| <b>Additional Information</b>                           |                      |                   |                       |

Insulation Resistance, JIS K 6911, as molded: 1E11 to 1E13Insulation Resistance, JIS K 6911, after boiling: 1E10 to 1E12Arc Resistance, JIS K6911: 180 secAppearance after heating, JIS K6911, @ 2 hrs: 200°CAll the ISO values were tested in accordance with JIS specifications.

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