

# TECACOMP® PK TRM CF20 black 4181

Polyketone

Ensinger GmbH

### Message:

Main features

very good bearing and wear properties

Target Industries

automotive industry

mechanical engineering

| General Information                               |                                                        |                        |             |
|---------------------------------------------------|--------------------------------------------------------|------------------------|-------------|
| Filler / Reinforcement                            | Carbon fiber reinforced material, 20% filler by weight |                        |             |
| Features                                          | Good wear resistance                                   |                        |             |
| Uses                                              | Application in Automobile Field                        |                        |             |
| Appearance                                        | Black                                                  |                        |             |
| Forms                                             | Particles                                              |                        |             |
| Processing Method                                 | Injection molding                                      |                        |             |
| Physical                                          | Nominal Value                                          | Unit                   | Test Method |
| Density                                           | 1.30                                                   | g/cm <sup>3</sup>      |             |
| Melt Mass-Flow Rate (MFR) (240°C/2.16 kg)         | 11                                                     | g/10 min               | ISO 1133    |
| Melt Volume-Flow Rate (MVR) (240°C/2.16 kg)       | 9.00                                                   | cm <sup>3</sup> /10min | ISO 1133    |
| Molding Shrinkage                                 |                                                        |                        | ISO 294-4   |
| Transverse flow                                   | 1.1                                                    | %                      | ISO 294-4   |
| Flow                                              | 0.40                                                   | %                      | ISO 294-4   |
| Water Absorption (Equilibrium, 23°C, 50% RH)      | 0.40                                                   | %                      | ISO 62      |
| Mechanical                                        | Nominal Value                                          | Unit                   | Test Method |
| Tensile Modulus                                   | 12700                                                  | MPa                    | ISO 527-2   |
| Tensile Stress                                    | 155                                                    | MPa                    | ISO 527-2   |
| Tensile Strain (Break)                            | 2.0                                                    | %                      | ISO 527-2   |
| Impact                                            | Nominal Value                                          | Unit                   | Test Method |
| Charpy Unnotched Impact Strength                  | 40                                                     | kJ/m <sup>2</sup>      | ISO 179/1eU |
| Thermal                                           | Nominal Value                                          | Unit                   | Test Method |
| Heat Deflection Temperature (1.8 MPa, Unannealed) | 213                                                    | °C                     | ISO 75-2/A  |
| Glass Transition Temperature                      | 15.0                                                   | °C                     | DIN 53765   |
| Melting Temperature                               | 220                                                    | °C                     | DIN 53765   |
| Linear thermal expansion coefficient              |                                                        |                        | ISO 11359-2 |
| Flow: 23 to 80°C                                  | 5.8E-5                                                 | cm/cm/°C               | ISO 11359-2 |
| Lateral: 23 to 80°C                               | 8.8E-5                                                 | cm/cm/°C               | ISO 11359-2 |
| Thermal Conductivity                              |                                                        |                        | DIN EN 821  |

|                             |               |         |                      |
|-----------------------------|---------------|---------|----------------------|
| -- 1                        | 0.39          | W/m/K   | DIN EN 821           |
| -- 2                        | 0.66          | W/m/K   | DIN EN 821           |
| Service Temperature         |               |         |                      |
| long term                   | 100           | °C      |                      |
| short term                  | 140           | °C      |                      |
| Electrical                  | Nominal Value | Unit    | Test Method          |
| Volume Resistivity          | 7.2E+4        | ohms·cm | ISO 3915             |
| Flammability                | Nominal Value | Unit    | Test Method          |
| Flammability Classification | HB            |         | IEC 60695-11-10, -20 |
| Injection                   | Nominal Value | Unit    |                      |
| Drying Temperature          | 80            | °C      |                      |
| Drying Time                 | 2.0 - 3.0     | hr      |                      |
| Processing (Melt) Temp      | 220 - 250     | °C      |                      |
| Mold Temperature            | 120           | °C      |                      |
| NOTE                        |               |         |                      |
| 1.                          | Through-plane |         |                      |
| 2.                          | In-plane      |         |                      |

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### 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

