

# GAPEKK™ 3200G

Polyetherketoneketone

Gharda Chemicals Ltd.

## Message:

Product Details: Ultra high performance thermoplastic polymer, unfilled Polyether Ketone Ketone (PEKK), semicrystalline granules suitable for injection molding and stock shapes extrusion, standard flow, Brown in color.

Application Areas: Suitable for high temperature applications, with high compressive strength & abrasion resistance, high chemical resistance & oil resistance etc.

| General Information |                               |  |  |
|---------------------|-------------------------------|--|--|
| Features            | Good Abrasion Resistance      |  |  |
|                     | Good Chemical Resistance      |  |  |
|                     | Good Flow                     |  |  |
|                     | High Heat Resistance          |  |  |
|                     | Oil Resistant                 |  |  |
|                     | Semi Crystalline              |  |  |
| Uses                | High Temperature Applications |  |  |
| Appearance          | Brown                         |  |  |
| Forms               | Granules                      |  |  |
| Processing Method   | Extrusion                     |  |  |
|                     | Injection Molding             |  |  |

| Physical                           | Nominal Value | Unit              | Test Method |
|------------------------------------|---------------|-------------------|-------------|
| Density                            | 1.30          | g/cm <sup>3</sup> |             |
| Molding Shrinkage <sup>1</sup>     |               |                   |             |
| Flow                               | 1.0           | %                 |             |
| Across Flow                        | 1.2           | %                 |             |
| Water Absorption (Equilibrium)     | 0.050         | %                 | ASTM D570   |
| Hardness                           | Nominal Value | Unit              | Test Method |
| Durometer Hardness (Shore D, 23°C) | 88            |                   | ASTM D2240  |
| Mechanical                         | Nominal Value | Unit              | Test Method |
| Tensile Modulus (23°C)             | 4000          | MPa               | ASTM D638   |
| Tensile Strength (Yield, 23°C)     | 110           | MPa               | ASTM D638   |
| Tensile Elongation (Break, 23°C)   | 10 to 15      | %                 | ASTM D638   |
| Flexural Modulus (23°C)            | 4300          | MPa               | ASTM D790   |
| Flexural Strength (23°C)           | 180           | MPa               | ASTM D790   |
| Compressive Modulus                | 2100          | MPa               | ASTM D695   |
| Compressive Strength (23°C)        | 132           | MPa               | ASTM D695   |
| Impact                             | Nominal Value | Unit              | Test Method |
| Notched Izod Impact (23°C)         | 50            | J/m               | ASTM D256   |

| Unnotched Izod Impact (23°C)                            | No Break                 |      | ASTM D256   |
|---------------------------------------------------------|--------------------------|------|-------------|
| Thermal                                                 | Nominal Value            | Unit | Test Method |
| Deflection Temperature Under Load (1.8 MPa, Unannealed) | 189                      | °C   | ASTM D648   |
| Continuous Use Temperature                              | 300                      | °C   | UL 746B     |
| Glass Transition Temperature                            | 176                      | °C   | ASTM D3418  |
| Melting Temperature                                     | 396                      | °C   | ASTM D3418  |
| Thermal Stability - Haake <sup>2</sup>                  | 20                       | min  |             |
| Flammability                                            | Nominal Value            |      | Test Method |
| Flame Rating (0.800 mm)                                 | V-0                      |      | UL 94       |
| Injection                                               | Nominal Value            | Unit |             |
| Drying Temperature                                      | 150                      | °C   |             |
| Drying Time                                             | 4.0 to 6.0               | hr   |             |
| Hopper Temperature                                      | 60.0 to 80.0             | °C   |             |
| Nozzle Temperature                                      | 420                      | °C   |             |
| Processing (Melt) Temp                                  | 390 to 420               | °C   |             |
| Mold Temperature                                        | 200 to 220               | °C   |             |
| NOTE                                                    |                          |      |             |
| 1.                                                      | 420°C nozzle, 220°C Mold |      |             |
| 2.                                                      | GSRF 05/420°C, 60 rpm    |      |             |

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