

# EC-40B

- **Out line:** EC-40B is a glass fiber filled PPS compound that provides for a encapsulating of micro devices and enhanced mechanical strength comparing to EC-10-A2.
- **Color:** Black

**Engineering Properties of EC-40B**

| Properties  | Test Method | Unit   | EC-40B               |
|---|-------------|--------|----------------------|
| General Information   |             |        | Low Pressure Molding |
| <ASTM>  |             |        |                      |
| <b>Physical</b>   |             |        |                      |
| Specific gravity  | D-792       | -      | 1.50                 |
| Water absorption, 23deg. /24Hrs. /in water                  | D-570       | Wt. %  | 0.03                 |
| Mold shrinkage, MD /TD <sup>a</sup>                         | D-955       | %      | 0.23/1.1             |
| <b>Mechanical</b>   |             |        |                      |
| Tensile strength  | D-638       | MPa    | 110                  |
| Tensile modulus   | D-638       | MPa    | 9000                 |
| Tensile elongation at break                                 | D-638       | %      | 1.2                  |
| Poisson's ratio   | -           | -      | 0.37                 |
| Flexural strength   | D-790       | MPa    | 135                  |
| Flexural modulus  | D-790       | MPa    | 8000                 |
| Flexural elongation at break                                | D-790       | %      | 1.7                  |
| Izod impact strength<br>notched / un notched                | D-256       | J/m    | 75/220               |
| Compressive strength  | D-695       | MPa    | 130                  |
| Rockwell hardness, R/M                                      | D-785       | -      | 121/100              |
| Coefficient of friction <sup>b</sup> , static /dynamic      | -           | -      | 0.35/0.35            |
| <b>Thermal</b>  |             |        |                      |
| Distortion temp. of under load, 1.82MPa                     | D-648       | °C     | 260                  |
| Coefficient of thermal expansion <sup>c</sup> , -30 to 90°C | D-696       | m/mK   | 2.3x10 <sup>-5</sup> |
| UL Flammability <sup>d</sup> , t~0.8mm                      | UL-94       | -      | V-0                  |
| <b>Electrical</b>   |             |        |                      |
| Dielectric strength, t=1.6mm                                | D-149       | kv/mm  | 16                   |
| Dielectric constant, 1MHz                                   | D-150       | -      | 4                    |
| Dissipation factor, 1MHz                                    | D-150       | -      | 0.005                |
| Comparative tracking index (CTI)                            | D-3638      | Volt   | -                    |
| Arc resistance  | D-495       | sec.   | -                    |
| Volume resistibility  | D-257       | Ohm.cm | 10 <sup>16</sup>     |
| <b>Process Conditions</b>                                   |             |        |                      |
| Cylinder temperature  | -           | °C     | 290-320              |
| Mold temperature  | -           | °C     | 120-150              |

a: MD; Mold direction, TD; Transverse direction, b: P=150KPa, V=0.3m/s, PPS vs. carbon steel,  
c: Average value of MD & TD, d: UL file No. E53829



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