

# Di-Pak™ E-4670

Thermoplastic

Hapco Inc.

## Message:

DI-PAK E-4600 SERIES

Flexible, high strength, 50 to 71 shore D hardness potting and encapsulating systems. Available in flame retardant (FR), 3 minute (-3) gel time, and in black or unpigmented.

| General Information |                                    |
|---------------------|------------------------------------|
| Features            | Electrically Insulating            |
|                     | Fast Cure                          |
|                     | Good Flexibility                   |
|                     | Low Viscosity                      |
|                     | Shock Absorbent                    |
| Uses                | Battery Cases                      |
|                     | Electrical/Electronic Applications |
|                     | Power Cable Shields                |
|                     | Switches                           |
| Appearance          | Black                              |
| Forms               | Liquid                             |
| Processing Method   | Encapsulating                      |
|                     | Potting                            |

| Physical                     | Nominal Value | Unit              | Test Method |
|------------------------------|---------------|-------------------|-------------|
| Specific Gravity             | 1.06          | g/cm <sup>3</sup> | ASTM D4669  |
| Molding Shrinkage - Flow     | 0.10 to 0.30  | %                 | ASTM D2566  |
| Weight - per cubic inch      | 17            | g                 |             |
| Service Temperature          | 150           | °C                |             |
| Gel Time <sup>1</sup> (25°C) | 18.0          | min               | ASTM D2971  |
| Thermal Shock Test           | Pass          |                   |             |
| Hardness                     | Nominal Value | Unit              | Test Method |
| Durometer Hardness (Shore D) | 69 to 73      |                   | ASTM D2240  |
| Mechanical                   | Nominal Value | Unit              | Test Method |
| Tensile Modulus              | 376           | MPa               | ASTM D638   |
| Tensile Strength             | 32.3          | MPa               | ASTM D638   |
| Tensile Elongation (Break)   | 87            | %                 | ASTM D638   |
| Flexural Modulus             | 393           | MPa               | ASTM D790   |
| Flexural Strength            | 25.6          | MPa               | ASTM D790   |
| Elastomers                   | Nominal Value | Unit              | Test Method |

|                                    |                                                    |         |             |
|------------------------------------|----------------------------------------------------|---------|-------------|
| Tear Strength <sup>2</sup>         | 116                                                | kN/m    | ASTM D624   |
| Impact                             | Nominal Value                                      | Unit    | Test Method |
| Notched Izod Impact                | 120                                                | J/m     | ASTM D256   |
| Unnotched Izod Impact              | No Break                                           |         | ASTM D256   |
| Thermal                            | Nominal Value                                      | Unit    |             |
| Thermal Conductivity               | 0.22                                               | W/m/K   |             |
| Electrical                         | Nominal Value                                      | Unit    | Test Method |
| Volume Resistivity                 | 4.2E+13                                            | ohms·cm | ASTM D257   |
| Dielectric Strength                | > 14                                               | kV/mm   | ASTM D149   |
| Dielectric Constant                |                                                    |         | ASTM D150   |
| 1 kHz                              | 1.90                                               |         |             |
| 100 kHz                            | 2.30                                               |         |             |
| Dissipation Factor (25°C, 100 kHz) | 0.038                                              |         | ASTM D150   |
| Thermoset                          | Nominal Value                                      | Unit    | Test Method |
| Thermoset Components               |                                                    |         |             |
| Part A                             | Mix Ratio by Weight: 100, Mix Ratio by Volume: 100 |         |             |
| Part B                             | Mix Ratio by Weight: 65, Mix Ratio by Volume: 60   |         |             |
| Thermoset Mix Viscosity (25°C)     | 2000                                               | cP      | ASTM D4878  |
| Demold Time (21°C)                 | 60 to 120                                          | min     |             |
| NOTE                               |                                                    |         |             |
| 1.                                 | 100 g                                              |         |             |
| 2.                                 | Die C                                              |         |             |

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