

### SELF-LUBRICATING ENGINEERED PLASTIC BEARINGS



### APPLICATIONS

**General** – Generally applicable within the limits of the material properties

**Industrial** – Medical equipment, awnings and blinds, scientific equipment, gaming equipment, office equipment, etc.

### CHARACTERISTICS

- Good bearing performance in dry working conditions
- Good bearing performance in lubricated or marginally lubricated applications
- Corrosion resistant in humid/saline environments
- Very good price performance ratio
- Very good weight performance ratio
- Within injection moulding tool feasibility unlimited dimensions and design features
- Compliant to ELV, WEEE and RoHS specifications

### AVAILABILITY

**Bearing forms available in standard dimensions:** Plain cylindrical bushes, plain flanged bushes

**Bearing forms made to order:** Standard forms in special dimensions, thrust washers, half-bearings, sliding plates, customized bearing designs



| BEARING PROPERTIES                      |  | IMPERIAL UNITS      | IMPERIAL VALUE | METRIC UNITS            | METRIC VALUE |
|---|--|---------------------|----------------|-------------------------|--------------|
| <b>GENERAL</b>                          |  |                     |                |                         |              |
| Maximum load, p                         | Static                                   | psi                 | 12 000         | N/mm <sup>2</sup>       | 80           |
|   | Dynamic                                  | psi                 | 6 000          | N/mm <sup>2</sup>       | 40           |
| Operating temperature                   | Min                                      | °F                  | - 40           | °C                      | - 40         |
|   | Max                                      | °F                  | 280            | °C                      | 140          |
| Coefficient of linear thermal expansion |  | 10 <sup>-6</sup> /F | 12             | 10 <sup>-6</sup> /K     | 22           |
| <b>DRY</b>                              |  |                     |                |                         |              |
| Maximum sliding speed, U                |  | fpm                 | 700            | m/s                     | 1.0          |
| Maximum pU factor                       | For A <sub>H</sub> / A <sub>C</sub> = 5  | psi x fpm           | 1 700          | N/mm <sup>2</sup> x m/s | 0.06         |
|   | For A <sub>H</sub> / A <sub>C</sub> = 10 | psi x fpm           | 6 800          | N/mm <sup>2</sup> x m/s | 0.24         |
|   | For A <sub>H</sub> / A <sub>C</sub> = 20 | psi x fpm           | 28 600         | N/mm <sup>2</sup> x m/s | 1.00         |
| Coefficient of friction, f              |  |                     | 0.15 - 0.30    |                         | 0.15 - 0.30  |
| <b>RECOMMENDATIONS</b>                  |  |                     |                |                         |              |
| Shaft surface roughness, Ra             |  | µin                 | 8 - 32         | µm                      | 0.2 - 0.8    |
| Shaft surface hardness                  |  | HV                  | > 200          | HV                      | > 200        |

**OPERATING PERFORMANCE**

|                          |                               |
|--------------------------|-------------------------------|
| Dry                      | Good                          |
| Oil lubricated           | Good                          |
| Grease lubricated        | Good                          |
| Water lubricated         | Fair                          |
| Process fluid lubricated | Good after resistance testing |

**FOR SUPERIOR / LEAD-FREE PERFORMANCE**

|                  |      |
|------------------|------|
| Water lubricated | EP22 |
|------------------|------|

**MICROSECTION**



PA6.6T + Solid Lubricant + Fillers