



Material: FTL176

Description

Using 175 as the base material this has been developed for more specialised applications where safety and continuous operation are important issues. The key difference between this material and 175M is the high graphite content acting as a dry lubricant, the graphite serves to reduce wear, and narrow the gap between static & dynamic friction coefficients which has particular interest in torque limiting and tension brake applications

Applications

- Various industrial applications.
- Friction torque limiting and tension brake applications.
- Industrial assembly applications.

Physical properties

- | | |
|----------------------|-----------|
| • Density g/cm | 1.80-1.90 |
| • Hardness (SHORE-D) | 76-84 |
| • Acetone extraction | <2.5% |
| • Ignition loss | 38.43% |

Mechanical properties

- | | |
|--|--------|
| • Tensile strength N/mm ²
(ASTM D-638) | 10.775 |
| • Compressive strength N/mm ²
10% (UNE 53205) | 76.75 |
| • Ultimate compressive strength N/mm ²
(UNE 53205) | 103.25 |

Friction properties

- | | |
|---|-----------------------------|
| • Friction coefficient (dynamic) μ
(See graph) | 0.45 \pm 0.05 |
| • Wear rate (@ 79N, 7m/s)
F.A.S.T | 50 - 70mm ³ /Kwh |

F.A.S.T. test conditions (max temperature).

The FAST is a 90-minute test at constant pressure and velocity, which reports response of friction coefficient vs temperature. These are maximum temperatures resistance before material lost coefficient

F=79N v=7m/s t=90min <250°C

F=100N v=11m/s t=50min <320°C

Recommended operating temperatures (max):

- | | |
|--------------------------|--------|
| • Continuous operation | 250°C |
| • Intermittent operation | 350 °C |

Adhesives

The use of any well known thermosetting adhesive is recommended.

Rubbing surfaces

Good quality, fine grained pearlitic cast iron with Brinell hardness of 150-200 is recommended.

μ (friction coefficient) vs temperature @79N/7m/s

