

# FTL004

✓ **General description:**

**FTL004** is Metal-ceramic bronze-graphite friction material with high content of ceramic components and graphite, designed for a dry friction use.

**FTL004** is suited for medium to heavy duty operating conditions with high coefficient of friction and high wear resistance. Good thermal stability up to 450 °C , for a short term up to 800°C. Small effect on the opposite surface suitable. For grinding, drilling and recess work.

✓ **Application:**

Industrial drum and band-brakes for aircraft. heavy earth machinery. Miscellaneous industrial devices.

✓ **Bonding:**

**FTL004** lining is solidly joined to its steel base pad by the layer of connecting material

✓ **Technical Data:**

μ for design

Static	(cold)	0.42 – 0.51
Dynamic	(cold)	0.37 - 0.5

✓ **Recommended Operation Range:**

Specific pressure	< 3,500 kN/m <sup>2</sup> (507 lbf/in <sup>2</sup> )
Max. rubbing speed	< 45 m/s (147 ft/s)
Max. continuous temperature	430 °C
Max. intermittent temperature	750 °C
Friction surface:	Steel, cast iron, cast steel

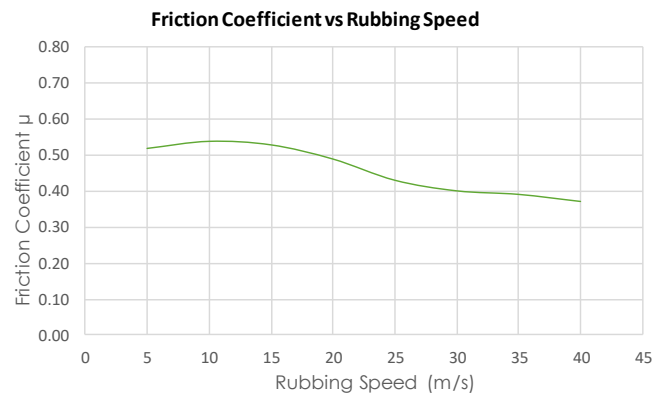
**Test Conditions**

Application speed	10 - 30 m/s (32 – 98 ft/s)
Clamping pressure	0.5 – 3 MN/m <sup>2</sup> (72 – 435 lbf/in <sup>2</sup> )
Speed ranging from	5 to 50 in steps of 5 m/s

(All figures shown below are measured on the laboratory testing bench under the test conditions showed)

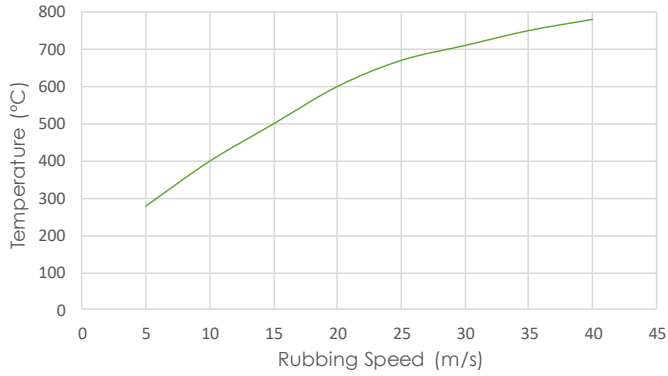
**Physical Properties**

Density	4.60 g/cm <sup>3</sup>
Specific heat	4.9 kJ/kg.K
Coefficient of thermal conductivity	4.2 W/m.K
Coefficient of thermal expansion	16.9 x 10 <sup>-6</sup> /K
Ultimate tensile strength	
Longitudinal	24 MN/m <sup>2</sup> (3,480 lbf/in <sup>2</sup> )
Ultimate shear strength	
Longitudinal	51 MN/m <sup>2</sup> (7,400 lbf/in <sup>2</sup> )





Temperature vs Rubbing Speed



Wear vs Rubbing Speed

