

# B044

SINTERED FRICTION MATERIAL

## Material Description

**B044** is a bronze sprinkled sintered friction material based on copper and tin, for dry running applications. More than 90% of the material is made up of metallic powders with a carefully harmonised grain spectrum. Its consistent shift properties are imparted by selected graphite's and special additives. Also to meet environmental needs it is lead free.

- Good thermal stability • High and stable coefficient of friction
- Smooth engagement characteristics • Good wear resistance

## Typical Applications

- Spring brakes and clutches
- Winches
- Load limiting clutches
- Steering clutches

## Average Friction Coefficient (dry)

- Static: 0.40 - 0.44
- Dynamic: 0.25 - 0.30

## Mating Material

- Surface finish < 2.0µm Ra (20µ")
- Steel hardened & tempered
- Cast steel
- Grey cast iron

## Recommended Max Load

- Dynamic pressure: 4.0 N/mm<sup>2</sup> (580 Lbf/in<sup>2</sup>)
- Static pressure: 40.0 N/mm<sup>2</sup> (5800 Lbf/in<sup>2</sup>)
- Rubbing speed: 50 m/s (98 Ft/sec)
- Specific power: 4.0 W/mm<sup>2</sup> (3.4 HP/in<sup>2</sup>)
- Thermal conductivity: 15.80 +/- 10% W/m-K
- Thermal capacity: 470.00 +/- 10% J/kg-K

## Oil Grooving

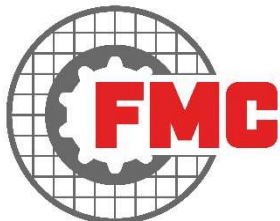
- Multi-pass tangential groove patterns in variety of configurations
- Grooves can either be pressed or machined

## Dimensions

- Friction thickness: Max 2.0 mm (0.060") to Min 0.35 mm (0.080")
- Friction diameter: Max 600 mm (24")

The above data is taken from specific test parameters therefore results can vary in different application conditions

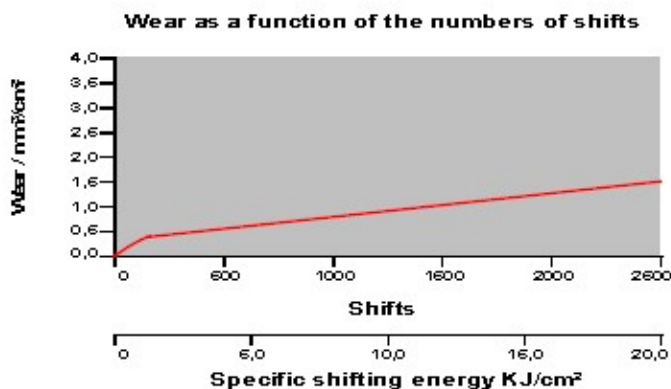
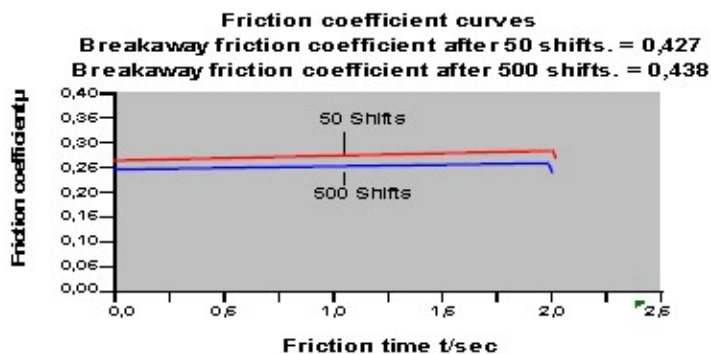
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DATA SHEET



**Test conditions for friction coefficient**

Total number of shifts	500
Speed	175 $\text{min}^{-1}$
Shift rate	2 $\text{min}^{-1}$
Backing material	Hardened steel
Facing area	45.24 $\text{cm}^2$
Friction areas	6
Sliding speed	0.84 $\text{m/s}$
Specific shift energy	0.290 $\text{J}/\text{mm}^2$
Specific shift output	1.45 $\text{W}/\text{mm}^2$

**Test conditions for wear**

Total number of shifts	2500
Speed	1440 $\text{min}^{-1}$
Moment of inertia	0.3772 $\text{kgm}^2$
Shift rate	1.5 $\text{min}^{-1}$
Backing material	Hardened steel
Facing area	66.09 $\text{cm}^2$
Friction areas	8
Sliding speed	7.52 $\text{m/s}$
Specific shift energy	0.081 $\text{J}/\text{mm}^2$