μtech

P501
FRICTION PAPER

DATA SHEET

Material Description

P501 is a non-asbestos cellulose fibre friction material reinforced with a high volume of graphite. This is a high strength material providing a very stable coefficient of friction and good thermal conductivity.

- High heat stability
- Smooth engagement characteristics
- Excellent energy capability
- Good wear resistance

Typical Applications

- Powershift Transmissions
- Power take-off clutches
- Forward-reverse clutches

Friction Coefficient (wet)

- Static: 0.12 - 0.16
- Dynamic: 0.11 - 0.14

Mating Material

- Surface finish < 0.5μm Ra (20μ")
- Steel
- Cast steel
- Grey cast iron

Recommended Load

- Max dynamic pressure: 3.5 N/mm² (508 Lbf/in²)
- Max rubbing speed: 45 m/s (147 Ft/sec)
- Max specific power: 4.0 W/mm² (3.4 HP/in²)

Microstructure of P501 50X

Oil Grooving

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

Dimensions

- Friction thickness: 0.50mm (0.02") ~ 1.20mm (0.05")
- Friction diameter: 1,000 mm (39") max 50 mm (2") min

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

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FMC

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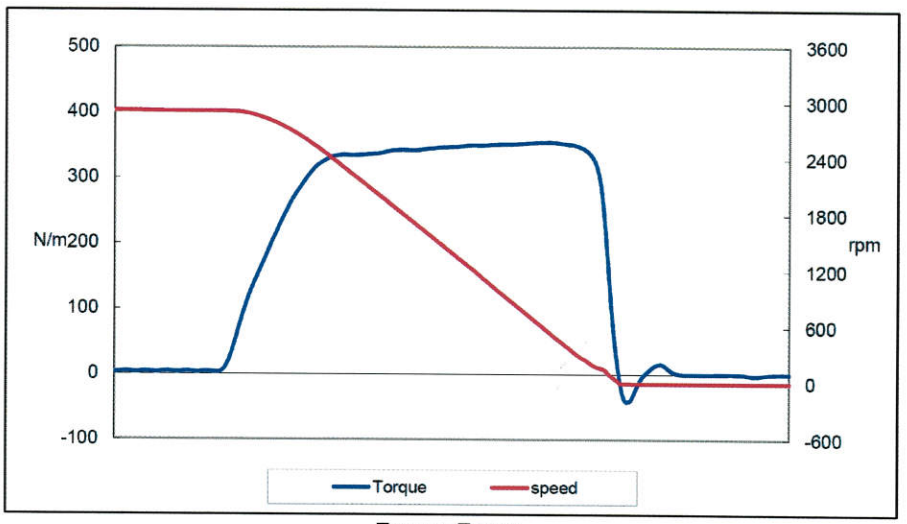
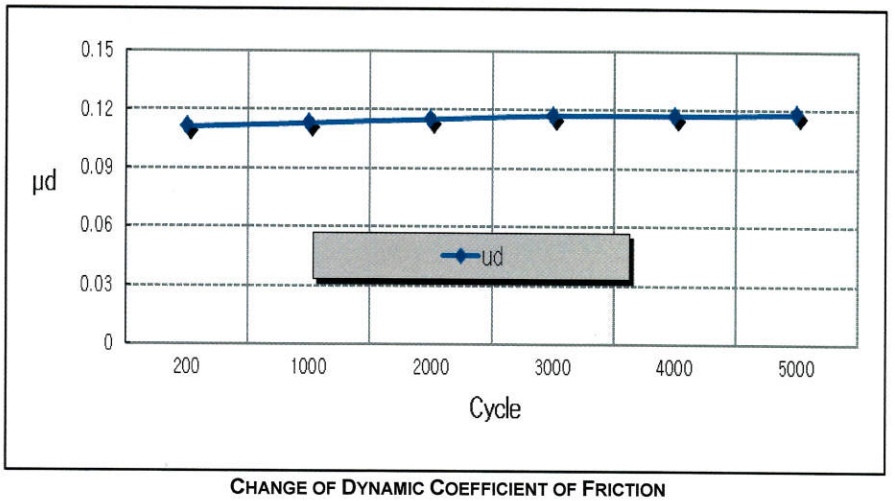


TORQUE TRACE



CHANGE OF DYNAMIC COEFFICIENT OF FRICTION

Total cycles	5,000 cycles
Inertia	0.04 kgf·m·sec^2
Dynamic rpm	2940
Friction facing dimensions	Ø133.5mm × Ø99.0mm
Friction surfaces	4
Unit energy	0.74J/㎟
Unit pressure	2.0 Mpa
Oil type	Tractor oil
Oil temperature	80℃(±5℃)
Arrangement	pDpDp

TEST CONDITION

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