

### Material Description

**P203** is a non asbestos friction material with good durability and a reliable friction coefficient at high temperatures.

- Smooth engagement characteristics
- Stable friction coefficient at high temperature
- Low ratio of static to dynamic coefficient of friction

### Typical Applications

- Wheel brakes
- Power take off clutches

### Friction Coefficient (wet)

- Static: 0.12 - 0.15
- Dynamic: 0.11 - 0.14

### Mating Material

- Surface finish < 0.5 $\mu\text{m}$  Ra (20 $\mu\text{"}$ )
- Steel
- Cast steel
- Grey cast iron

### Recommended Load

- Max dynamic pressure: 3.5 N/mm<sup>2</sup> (508 Lbf/in<sup>2</sup>)
- Max rubbing speed: 35 m/s (115 Ft/sec)
- Max specific power: 4.0 W/mm<sup>2</sup> (3.4 HP/in<sup>2</sup>)



Microstructure of P203 50X

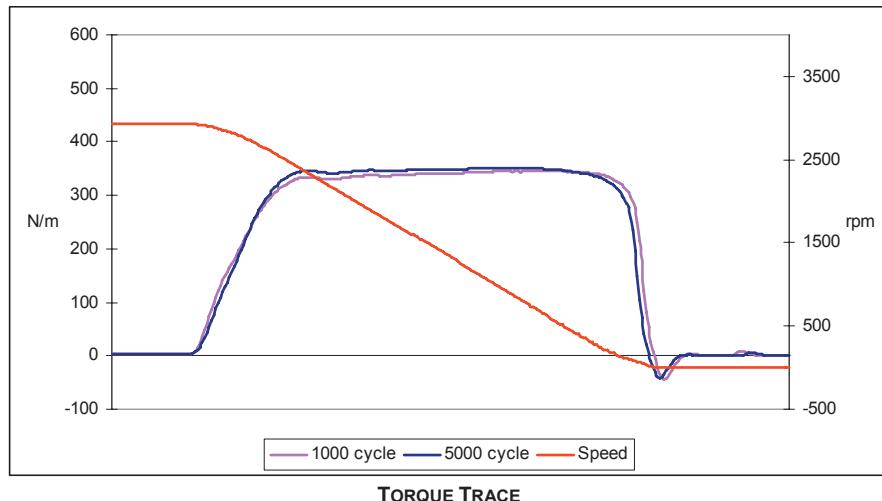
### Oil Grooving

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

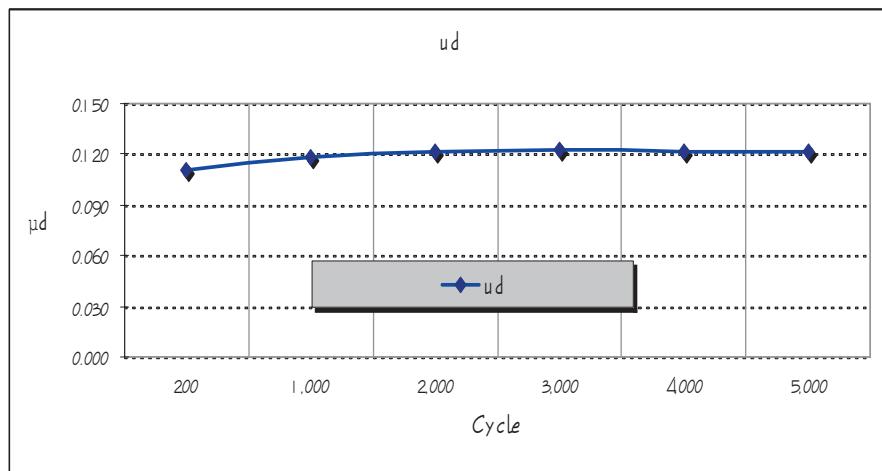
### Dimensions

- Friction thickness: 1.2 mm (0.047") max  
0.50 mm (0.02") min
- 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



TORQUE TRACE



CHANGE OF DYNAMIC COEFFICIENT OF FRICTION

Total cycles	5,000 cycles
Inertia	0.04 kgf·m·sec <sup>2</sup>
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°C(±5°C)
Arrangement	pDpDp

TEST CONDITION