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

Recommended Load

- Max dynamic pressure: 3.5 N/mm² (508 Lbf/in²)
- Max rubbing speed: 35 m/s (115 Ft/sec)
- Max specific power: 4.0 W/mm² (3.4 HP/in²)

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

Microstructure of P203 50X

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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
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<tbody>
<tr>
<td>Total cycles</td>
<td>5,000 cycles</td>
</tr>
<tr>
<td>Inertia</td>
<td>0.04 kgf·m·sec²</td>
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<tr>
<td>Dynamic rpm</td>
<td>2940</td>
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<tr>
<td>Friction facing dimensions</td>
<td>Ø133.5mm × Ø99.0mm</td>
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<tr>
<td>Friction surfaces</td>
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<tr>
<td>Unit energy</td>
<td>0.74 J/□</td>
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<tr>
<td>Unit pressure</td>
<td>2.0 Mpa</td>
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<tr>
<td>Oil type</td>
<td>Tractor oil</td>
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<tr>
<td>Oil temperature</td>
<td>80°C (±5°C)</td>
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<tr>
<td>Arrangement</td>
<td>pDpDp</td>
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