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

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)

Mating Material

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

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.
**FRICION PAPER**

**TOQUE TRACE**

**CHANGE OF DYNAMIC COEFFICIENT OF FRICTION**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Total cycles</td>
<td>5,000 cycles</td>
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<tr>
<td>Inertia</td>
<td>0.04 kgf·m·sec^2</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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<td>Friction surfaces</td>
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<tr>
<td>Unit energy</td>
<td>0.74J/m²</td>
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<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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<td>Oil temperature</td>
<td>80°C(±5°C)</td>
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<tr>
<td>Arrangement</td>
<td>pDpDp</td>
</tr>
</tbody>
</table>

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