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ID Material: 18/04 J. Thompson Revision: 0 Date: 11/19/18 **TF2000** 

The TF2000 is our standard formulation at ProTec Friction and is principally intended for automotive clutch applications. Under normal operating conditions, TF2000 is a very reliable, hard wearing and economic material. The glass fiber reinforcement yarn is spiral woven with a fine copper core to produce a strong material with good heat transfer characteristics. TF2000 facings combines high resistance of bursting with smooth behaviour. ProTec Friction clutch facings are suitable for automobiles and trucks. TF2000 is a medium high friction material with stable performance, low rate of wear and guarantees a long life performance.

## **Material Data**

## Friction Properties (according to graphics)

| Static Friction Coefficient (15bar, from box): | 0.55±0.05  | μ                    |
|--|------------|----------------------|
| Static Friction Coefficient (15bar, 100oC):    | 0.60±0.05  | μ                    |
| Dynamic Friction Coefficient (10bar, 10m/s):   | 0.55±0.05  | μ                    |
| Wear Rate (10bar, 15m/s):                      | 70±10      | mm <sup>3</sup> /Kwh |
| T <sup>o</sup> Fading (10bar. 10m/s):          | >572°F     | °F                   |
| Physical Properties                            |            |                      |
| Hardness (DIN53505):                           | 85±5       | Shore-D              |
| Specific Gravity (ASTM D792-91):               | 1.87±0.05  | gr/cm3               |
| Ignition Loss (ASTM D-2524):                   | 40±2       | %                    |
| Thermal Conductivity (ASTM E1952-01):          | 0.244±0.03 | W/m⁰K                |
| Mechanical Properties                          |            |                      |
| Compressive Strength (UNE 53205):              | 120±10     | N/mm <sup>2</sup>    |
| Burst Resistant (200 x 137 x 3,5) 200°C:       | 8500±100   | RPM                  |
| Recommended Working Values                     |            |                      |
| T° Max. Continuous Operation:                  | 482        | °F                   |
| T° Max. Intermittent Operation:                | 662        | °F                   |

## Material Type : Woven yarn

**Appearance / Formats** 

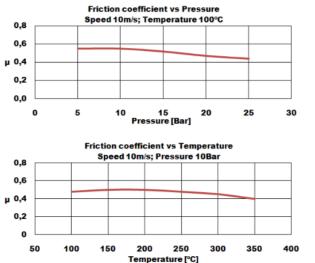


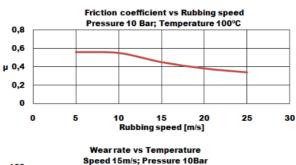
## Applications

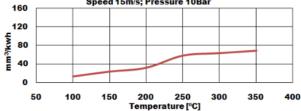
Industrial clutches - Truck clutches - Vehicle clutches

| Price Level : \$\$\$\$ | Price | Level | : | \$ | \$ | \$ | \$ |
|------------------------|-------|-------|---|----|----|----|----|
|------------------------|-------|-------|---|----|----|----|----|

| Reach (EC) 1907/2006 - RoHS 2011/65/EU : |       | Compliance                             |  |  |
|--|-------|--|--|--|
| Others                                   |       |  |  |  |
| Recommended Mating Surface:              | Perli | litic cast iron, hardness<br>HB150-200 |  |  |
| Recommended Adhesives:                   | Th    | ermosetting adhesive                   |  |  |
| Oil Resistant:                           |       | Yes                                    |  |  |







Rubbing speed, temperature and pressure are related. Changing any values will change other. The values shown represent typical conditions, but are not ultimate limits of the material.