

TTC141 is an advanced carbon friction material based on natural and synthetic fibers and fillers strengthened by a unique resin binder. It provides superior heat resistance and anti-wear performance under severe power conditions and delivers a positive μV characteristic at various pressures and temperatures. TTC141 offers a close to 1:1 relationship between static to dynamic coefficient of friction, giving smooth engagement and a superior NVH performance. It also offers high energy capability, with a stable coefficient of friction over speed and pressure. TTC141 yields superior wear resistance with good oil compatibility.

Friction Properties

Static Friction Coefficient: 0.9-0.14 \pm 0.05 μ

Dynamic Friction Coefficient: 0.10- .13 \pm 0.05 μ

Material Type: Carbon Fiber Matrix

Appearance/Formats:

Rings, Gears.
Bonded Parts.
Grooved with various configurations.

Physical Properties

Dynamic Pressure: 6 N/mm² (870 psi).

Rubbing Speed: 50 m/s (164 Ft/sec).

Specific Power: 4.4 W/mm² (3.74 HP/in²).

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

Thickness: Max 1.50mm (0.06") to Min 0.50mm (0.02").

Diameter: Max 1,000 mm (39.37")

Applications

Transmission Clutches.
Limited Slip Differentials.
Wheel brakes.

Thermal Properties

Contact ProTec

Compliance: Reach(EC)1907/2023 & RoHS2015/863/EU

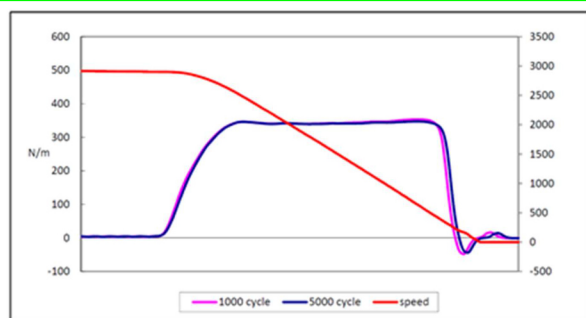
Additional

Recommended Mating Surfaces: Cast Iron with surface finish < 0.5 μ m Ra (20 μ in CLA)

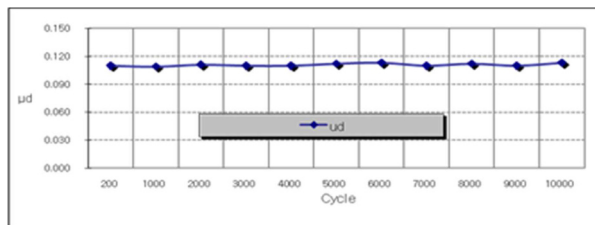
Recommended Adhesive: Thermosetting.

Oil Resistant: Yes.

The above data is taken from specific test parameters, therefore results can vary in differing application conditions



Torque Trace



Change of Dynamic Coefficient of Friction

Total cycles	5,000 cycles
Inertia	0.04 $\text{kgf} \cdot \text{m} \cdot \text{sec}^2$
Dynamic rpm	2940
Friction facing dimensions	$\varnothing 133.5\text{mm} \times \varnothing 99.0\text{mm}$
Friction surfaces	4
Unit energy	0.74 J/mm ²
Unit pressure	2.0 Mpa
Oil type	TO-4
Oil temperature	80°C ($\pm 5^\circ\text{C}$)
Arrangement	pDpDp

Test Conditions