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## **Benchmark test: TMD Friction coated brake discs stand out from the crowd for coating thickness, uniformity and corrosion resistance**

Leverkusen, 30<sup>th</sup> August 2017. TMD Friction tested the quality and performance of its benchmark series Textar brake disc coating, comparing Textar brake discs to three competitor products. The majority of brake discs in the market are coated, as this protects the brake disc top hat from corrosion even after assembly. Corrosion should not only be prevented for technical reasons, but can also be an aesthetic issue when using alloy wheels.

TMD Friction tested for coating thickness, uniformity, and corrosion resistance – all factors that can influence braking comfort. Overall, Textar coated brake discs had the thinnest and most even coating, whilst also proving equally resistant to corrosion when compared to their thicker-coated competitors. In general, the tests also showed that coated discs have equivalent break-in properties to uncoated discs.

In order to evaluate coating thickness and uniformity, TMD Friction defined 20 measuring points, including four measuring points at the contact surface of the disc top hat, and four on the visible outer surface of the disc. The results showed that Textar coated brake discs had the thinnest coating in all measuring areas (see Fig.1 & Fig.2), with only a slight variation in data, indicating high uniformity in their coating.

Both coating thickness and uniformity make a real difference to brake reliability; if the coating is too thick and uneven on the contact surface of the brake disc top hat, it can have a huge impact on runout. Too much runout brings about braking growl and leads to steering wheel movement and/or vibrations in the brake pedal. Therefore, the thinner coating not only ensures efficient use of materials, but also brings about improved braking reliability.

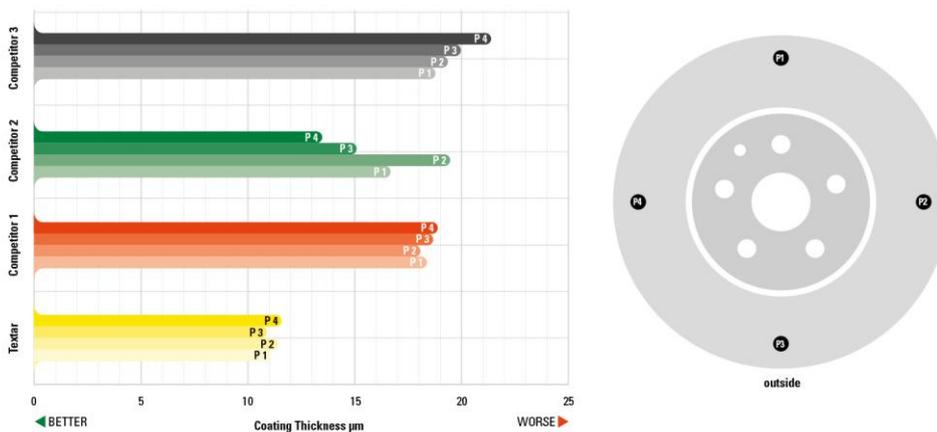
In order to determine corrosion resistance, the brake discs were sprayed with five percent saline solution in a salt spray cupboard for 96 hours. Results showed that the thinner coating doesn't lead to higher corrosion. Despite having the thinnest coating among the tested products, Textar discs had similar results to their competitors'.

As Vincenzo Di Caro, development engineer at TMD Friction, explains, "Coated brake discs can be used as and when you need them, without preparation. To protect from corrosion, uncoated discs are stored in oil, which must then be removed from the disc before assembly.

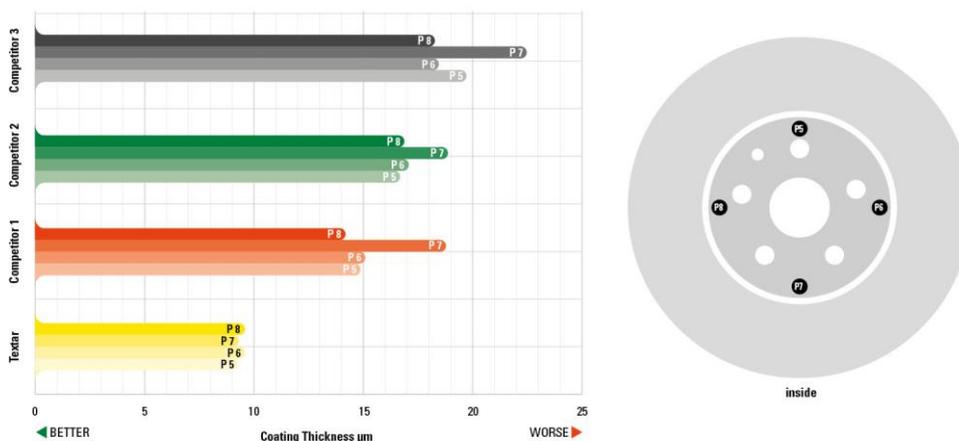


Coated discs don't require this oil removal, reducing workload and making the process more environmentally friendly through reducing oil waste too. We recommend garages always clean the existing hub and remove corrosion before assembling the disc so that the new brake disc can reach optimum performance."

TMD Friction regularly carries out tests within its benchmark series in order to secure and develop the high quality and performance of its products. For the comparison, TMD Friction always chooses a balanced mix of competitors, including well-known OE manufacturers, as well as manufacturers serving the aftermarket sector with brake pads developed and produced according to OE standards .



**Picture 1:** Test results for Textar (yellow) and the three competitor products at four different measuring points (P1 - P4) at the outer surface of the brake disc.



**Picture 2:** Test results for Textar (yellow) and the three competitor products at four different measuring points (P5 – P8) at the contact surface of the disc top hat.

# TMD FRICTION

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*Press Release*



**Picture 3:** Coated Textar brake disc

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## **About TMD Friction**

TMD Friction is one of the world's leading manufacturers of brake friction materials to the automotive and brake industry. The company's product portfolio comprises of disc brake pads and drum brake linings for passenger cars and commercial vehicles together with friction materials for racing and industrial applications. With its brands Textar, Mintex, Don, Pagid and Cobreq, TMD Friction has a market-leading position in the global replacement parts market. Under the brand names Cosid and Dynotherm TMD Friction develops and produces friction materials for industrial applications. TMD Friction has four operations in Germany as well as in Europe, USA, Brazil, Mexico, China, Japan and South Africa. The TMD Friction Group employs approximately 5,000 people worldwide. For further information please visit [www.tmdfriction.com](http://www.tmdfriction.com).

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