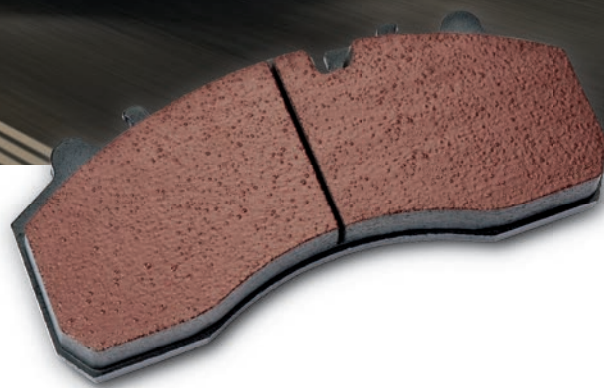


TEXTAR®
BRAKE TECHNOLOGY



INNOVATION. HIGH PERFORMANCE. SAFETY.
YESTERDAY. TODAY. **TOMORROW.**

www.textar.com

PERFORMANCE AND SAFETY ASSURED.

Choosing the right friction solution needn't be a challenge. Be it for truck, trailer, bus or coach, Textar offers disc brake pads and drum brake linings for 100% of all European commercial vehicles. And with Textar, every product comes with the assurance of total quality, maximum safety and ultimate reliability.

As the world's leading brand for commercial vehicle brake friction and the leading supplier of brake pads and linings to both the O.E. sector and the aftermarket, Textar offers the performance and safety that only the original can guarantee. That's why 70% of all commercial vehicles in Europe are fitted with Textar brake linings as standard.

Driving innovation: Textar's new lightweight disc brake pads combine safety with sustainability. Their ultra-strong, yet lightweight design contributes to lowering fuel consumption and emissions, so they're better for you and for the environment too.



QUALITY FRICTION PRODUCTS FOR QUALITY MARQUES.

Global O.E. references:

Baohua / KIC
BPW
CNHTC
Csepel
DAF
Dennis
Dongfeng
EvoBus
Ford Otosan

Foton
FUWA
GFA
Haldex
Hualing Truck
Irisbus
Iveco
Kamaz
Kässbohrer

Knorr-Bremse
Knott
MAN
MCI
Menarini
Mercedes-Benz
Meritor
Neoplan
Optare

Prevost
Renault Trucks
ROR
SAF-Holland
Scania
Solaris
Valx
Van Hool
Volkswagen

Volvo Trucks & Buses
Wabco (Perrot)
Warstein
Yutong





BRAKING WITHOUT COMPROMISE.

Because the braking of a vehicle requires far more energy than its acceleration, brake pads and linings in commercial vehicles are continually exposed to high stresses.

Example: With an engine power of 340 kW, a 40 t truck can accelerate to 80 km/h in 45 seconds. In contrast, full emergency braking from 80 to 0 km/h in 3 seconds requires a braking power of 3,300 kW. An unbelievably high stress factor for the rather small friction component. Compromises in terms of quality can quickly become very expensive.

Textar stands for safety. No ifs or buts.

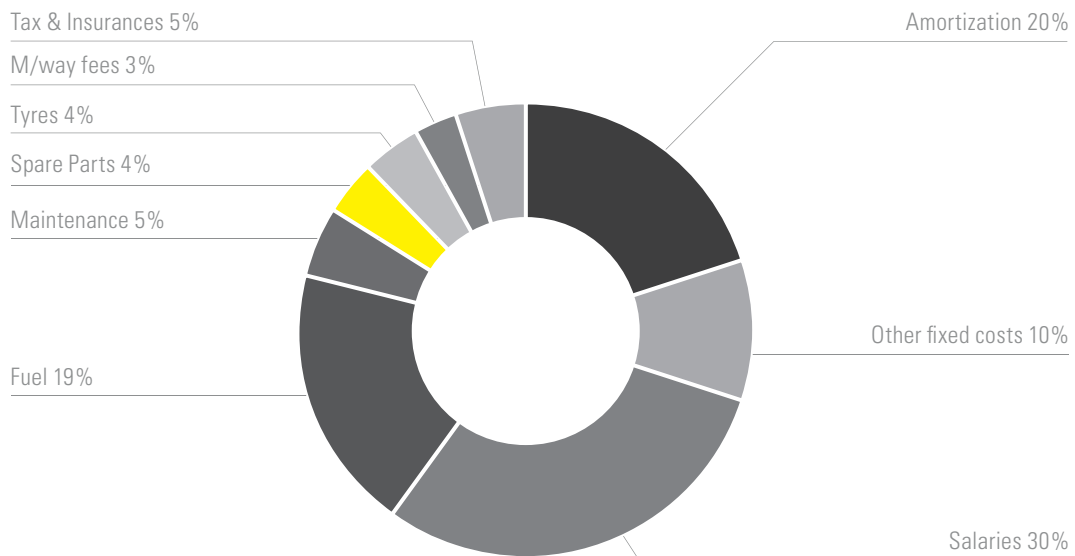
That's why, at TMD Friction, we take up to three years to develop a friction product. During this process each new friction component is subjected to the most rigorous tests before its market launch:

- Up to 300,000 kilometres of testing on the road and up to 2,000 hours of dynamometer testing
- Computerised evaluation of braking performance and wear pattern
- Rigorous homologation testing in real life conditions
- Intensive NVH (Noise, Vibration, Harshness) and comfort engineering



LONG-TERM PREMIUM QUALITY.

Vehicle down-time carries a heavy cost burden for commercial vehicle operators. The solution: **Premium Quality.** Premium quality parts last longer and are less prone to failure. Using premium quality parts puts a brake on the frequency of vehicle maintenance, enabling your vehicles to be earning money more of the time, instead of costing money on a regular basis. Textar pads and linings provide the optimum combination of long service life, low wear and frictional stability. So put your foot down and insist on premium quality. Insist on Textar.



Spare parts make up only a small portion of the total costs of a fleet operating company. However, the small savings that can be gained by fitting cheaper parts can quickly lead to high maintenance costs.



WE GO TO THE LIMIT. SO THAT YOU DON'T HAVE TO.

Brake pads are exposed to extreme conditions and loads, none more so than those fitted to commercial vehicles. A secure bonding of the friction material to the backing plate is therefore imperative.

Depending on the application and thermal load, TMD Friction uses a range of different mechanical processes on its commercial vehicle brake pads to provide the strength that each application demands:

- **steel plate with brass pins** (TMD patent)
- **cast plate with brass pins** (TMD patent)
- **cast plate with cast-on pins** (integral cast plate)
- **steel plate** with weld mesh
- **NEW! Lightweight plate with pins** (patented by TMD) **NEW!**

The benefits: Even with the most extreme thermal loads, our processes guarantee permanent bonding of the friction material to the backing plate. In other words: optimum safety and comfort.



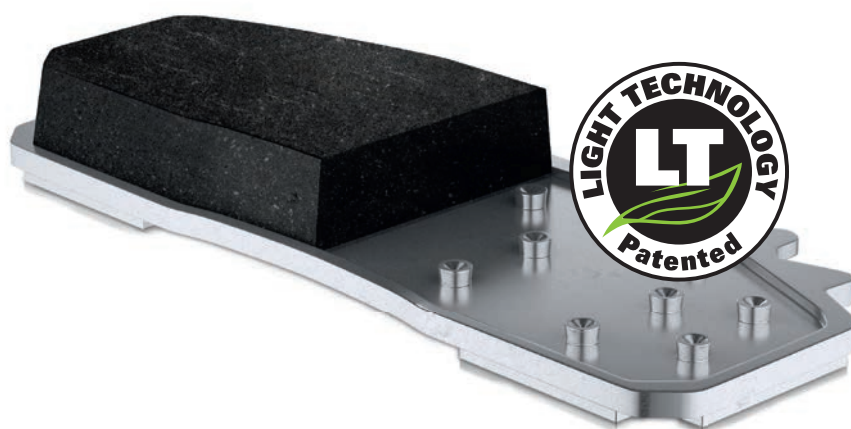
Cast-iron backing plate



Backing plate with pins



Weld-mesh backing plate



Further information under:
www.textar.com



LESS IS SOMETIMES SIGNIFICANTLY MORE.

Lighter vehicle components help to reduce vehicle weight – which in turn leads to fuel savings and lower CO2 emissions. TMD Friction is the trailblazer in this sector and Textar brake pads manufactured with the new lightweight backing plate from TMD Friction's **Lightweight Technology Program** are lighter than conventional commercial vehicle brake pads without compromising safety. The advantage for fleet operators: Textar's lightweight brake pads utilise the same geometry as standard brake pads, so they're a direct replacement fit. Making this simple change to lightweight brake pads can contribute to an overall reduction in vehicle weight and an improvement in fuel consumption that can realise noticeable fuel savings over the service life of a commercial vehicle. To find out more visit www.textar.com and use our online calculator to see the potential savings for your fleet.

DELIVERING ON THE HIGHEST EXPECTATIONS.

With patented bonding technologies and advanced production methods approved for the O.E. sector, the Textar product range is unique in the international aftermarket. Textar friction products for commercial vehicles are a perfect combination of superior braking performance, long service life and low disc and drum wear. This first-class quality can be found across the entire range of more than 600 disc brake pads and drum brake linings for commercial vehicles.

At TMD Friction we work in partnership with vehicle, axle and brake system manufacturers to develop application specific friction solutions. It's our knowledge and expertise that's behind the braking technology and friction fitted to a vast range of commercial vehicles, trailers, buses and coaches as they roll off production lines. For example, T090, our market leading material for drum brakes, was developed in partnership with BPW specifically for their axles. Likewise T0100 was developed specifically for SAF. *In both cases, Textar remains the exclusive O.E. supplier for these trailer applications.* So it's no wonder that both the axle manufacturer's logo and the Textar logo are to be found on the aftermarket replacement part.

Our material T7400 for disc brakes continues to be the top O.E. choice for buses, not least because of its unrivalled wear characteristics. The Textar range includes not only high quality brake pads, discs and linings, but also a comprehensive range of wear indicators and accessories.

With the addition of the new lightweight brake pads for commercial vehicles that pave the way for the future with efficient and environmentally-friendly brake solutions, Textar is offering a full product range to meet the highest demands.

100+ DISC BRAKE PADS
500+ DRUM BRAKE LININGS



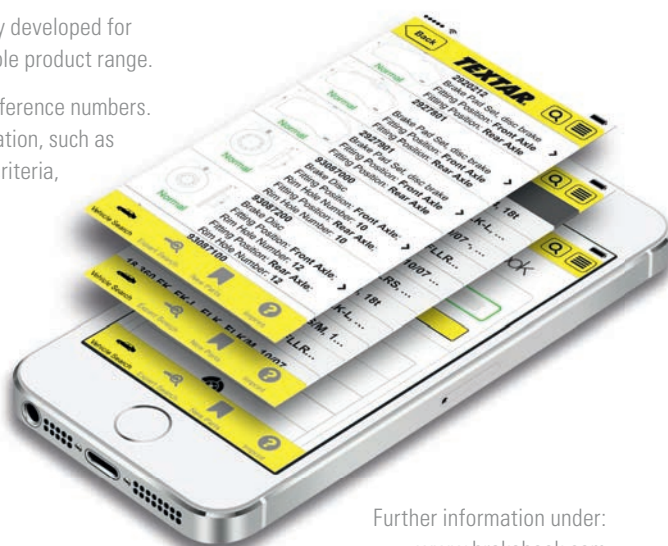
BRAKEBOOK. MY ONLINE CATALOGUE.

This cutting-edge web-based catalogue system has been exclusively developed for TMD Friction and contains detailed catalogue data covering our whole product range.

Search for the right part either by Textar part number, OE- or cross reference numbers. The expert search function also allows searching by product specification, such as width, height, thickness, number of wear indicators and many other criteria, making the identification of brake parts as easy as possible

New products will be displayed automatically after **weekly** data updates. Therefore, check frequently to see what's new.

In addition, Brakebook allows registered users to create pdf catalogues tailored to their individual requirements - either for the entire product range, a selection of products, parts from particular manufacturers or even for special models. So your customers will always be up to date.



Further information under:
www.brakebook.com



TOTAL SERVICE: 24/7/365.

On www.textar.com, you will find everything worth knowing about Textar. Every day, at any time, all year long. Be it the current product catalogues or a large variety of brochures.

SUPPORT FOR DEALERS AND WORKSHOPS.

You recognise that Textar enables you to offer your customers the best. That's why we support you with Textar advertising material and brochures about products and technology, as well as other services for dealers and workshops.

Our newsletter ensures you're always up to date with the latest information about Textar.

INCREASING KNOWLEDGE. IMPROVING SKILLS.

Want to keep up with the latest advances in brake technology? No problem. Our team of experts offers world-wide training courses, individually tailored to the specific requirements of workshops and dealers to improve knowledge and customer satisfaction.



TMD IS ALL ABOUT BRAKE TECHNOLOGY.

As the global leader in brake friction solutions, we are trusted by the biggest brands in the automotive, industrial and rail sector to deliver effective, reliable and safe braking applications.

TMD Friction is the preferred supplier for the global leading car brands and commercial vehicle manufacturers, and we are also one of the leaders in the rail sector. Our pioneering products are also chosen to provide effective, safe braking for some of the world's most prestigious racing series, such as The Le Mans 24 hours.

Yesterday. Today. Tomorrow.

Over a hundred years in the business have seen us grow and prosper, becoming the world's leading supplier of brake friction. Our continued success is based on providing technical excellence, consistent quality and constant innovation through intensive R&D investment.

Tomorrow's solutions developed today

Developing and refining products to improve performance for quieter, smoother, more efficient and environmentally responsible braking is a continuous process. We invest more than €25 million each year to ensure we not only meet the demands of today, but pioneer the technology that will be needed for tomorrow.

TMD Friction Services GmbH

Schlebuscher Str. 99, 51381 Leverkusen
Germany

T. +49 (0) 2171 - 703-0
F. +49 (0) 2171 - 23 88

E-Mail: info@tmdfriction.com
www.tmdfriction.com

TMD FRICTION
A NISSHINBO GROUP COMPANY