With over 1,300 products and 50 different friction lining recipes, the HELLA PAGID brake pad product line covers almost all vehicles sold in Europe. And in guaranteed top quality as we develop all of the brake pads ourselves and manufacture them in European factories only. In the process, HELLA PAGID far exceeds the performance specifications defined in the ECE R90 guidelines.

All products must prove that they are ready to be sold on the market by successfully undergoing a 300,000 kilometer endurance test run in the research and development center. One other aspect that is typical of HELLA PAGID is that all products are coordinated specifically for certain vehicle types, brake systems, engine outputs, driving loads and braking characteristics. It goes without saying that this could not be done without engaging in ongoing collaboration with the automotive industry.

SAFETY FIRST

When it comes to safety, we don’t play around. Key fundamental data is obtained not only by conducting comprehensive research and development studies, but also leveraging the practical experience gained on a daily basis. In the process, focus is placed primarily on the braking, wear and comfort characteristics of the pads. In this context, the standards set forth by the automotive industry are of critical importance to us.

Our brake pad testing standards

➔ Compressibility test
➔ Heat transfer test
➔ AMS test
➔ Expansion tests
➔ Shear strength test
➔ Dyno test

Braking distance matters

Just 3 meters can be all it takes to save a life. This is why we never let risk enter the equation. All products are thoroughly tested in accordance with the standards and requirement specifications defined by vehicle and brake manufacturers. In our own research and development center as well as on the road under real-world conditions.

![Braking distance comparison](Graphic based on: VW Passat B6 (-2010) - B8 (2010-))

<table>
<thead>
<tr>
<th></th>
<th>HELLA PAGID</th>
<th>Competitor 1</th>
<th>Competitor 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hella Pagid</td>
<td>38.4 m</td>
<td>41.6 m</td>
<td>42.8 m</td>
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A high coefficient of friction ensures maximum braking performance at any temperature. High-quality brake pads from Hella Pagid ensure the highest level of performance from the first all the way to the last braking maneuver.
Separation of the brake pad
The brake pad is partially separated from the base plate

Cause:
➔ Thermal overload
➔ Underlying rust
➔ New brake pad mounted on old disk.

Thermal overload
Brake pad damaged by overheating. The binding agents in the pad are destroyed and the brake pad material cracks

Cause:
➔ Jammed/stuck guide sleeve
➔ Brake caliper piston is stiff
➔ Extreme driving patterns or continuous braking

Worn patches and scoring
The surface of the brake pad exhibits marked scoring and signs of wear

Cause:
➔ New pads were mounted on old, worn brake discs
➔ Foreign body between the brake pad and the disc
➔ Environmental influences (salt, dirt, etc.)

Excessive wear
Brake pads are worn down to the base plate

Cause:
➔ Inadequate maintenance
➔ Inspection intervals overshot
➔ Continuous braking on descents

ATTENTION: BRAKING FORCE KILLER!
Brake pads can only offer trouble-free operability if they are in good working order. The following are typical symptoms of damaged and worn brake pads:

Anatomy of a brake pad
Our brake pads comprise multiple layers, whereby each layer fulfills certain functions. When all parts work together in conjunction with secondary measures, maximum reliability and durability are ensured.

DID YOU KNOW ...
... that a brake pad used in an emergency maneuver to brake from 200 km/h to 100 km/h heats up to over 250 °C in just 3.5 seconds? An oven needs 15 minutes for this, which is 250 times longer.