Reducing fine particle emissions without compromising performance, durability, and safety is key in today’s development of innovative friction materials. Wabtec’s Green Friction solutions addresses these needs. Green Friction technology is the result of both Wabtec’s expertise in friction materials and the company’s significant investment in accurately measuring braking-particle emissions. Our cutting-edge solution is reducing particle emissions from friction braking on trains.

**BENEFITS**

- Reduced emissions from friction braking by 60% for PM10, 80% for the PM2.5, and 90% for PM1.
- Optimized life cycle cost when green friction is paired with high-grade cast iron (patented friction pair).
- Increased pad life cycle up to 4.5 times compared to traditional organic pads.
- Low noise, compatible with urban applications.
- Plug and play, no brake system setting adjustments needed.
- Addresses the latest evolution in standards (e.g. EN15328)

**URBAN CHALLENGES**

We’re committed to improving air quality and preserving our environment, especially in urban areas and tunnels where air quality is a challenge.

Wabtec’s Green Friction Line significantly improves urban air quality. Over the past year, this technology has undergone rigorous testing with Paris region operator, RATP, and has proven its ability to reduce particle emissions from friction braking on metro trains by up to 90 percent. RATP and Wabtec have equipped two trains that operate on one of the busiest lines in Europe with this new technology for a final pilot. This technology represents a significant milestone on the journey towards cleaner tunnels for passengers and network personnel.

Up to 90% less fine particles mass during brake application.
The Green Friction product portfolio was developed to meet current and future regulatory standards regarding air pollution and friction performance.

**FRICTION PERFORMANCE**

Typical friction coefficients for axle mounted discs according to UIC program 2B1. The tested pad was the SF140FF/350.

![Graph showing friction coefficients for UIC 541-3 program 2B1](image)

Typical friction coefficients for axle mounted discs according to UIC program 6A. The tested pad was the SF140FF/350.

![Graph showing friction coefficients for UIC 541-3 program 6A](image)

**OTHER GREEN FAMILY MATERIALS EN 15328-COMPLIANT**

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<th>Standard</th>
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