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Trocellen. Light weight,  
environmental friendliness  
and great simplicity

50° 49' N	07° 09' O	<b>Germany</b>
40° 28' N	03° 21' O	<b>Spain</b>
41° 53' N	12° 28' O	<b>Italy</b>
47° 30' N	19° 02' O	<b>Hungary</b>
58° 49' N	53° 07' O	<b>Russia</b>
02° 54' N	101° 28' O	<b>Malaysia</b>
35° 40' N	139° 49' O	<b>Japan</b> FURUKAWA Otsuka
39° 54' N	116° 23' O	<b>China</b> FURUKAWA Otsuka

foaminfunction

ALWAYS ONE STEP AHEAD





## TROCELLEN FOOTWEAR

Based in Montebelluna (TV), which is known as the heart of the sports shoe district, the business unit Footwear avails itself of highly qualified technicians and employees and offers an extensive range of innovative materials catalogued in an efficient system, as well as many converting possibilities. In this way Trocenen Footwear anticipates and responds the technical and commercial needs of the customers with reliable know-how and cost-efficient production processes.

## TROCELLEN SHOCKFREE

The well known and reliable technology of Trocenen Tatami mats for martial arts is now being successfully used in the Footwear industry. Maximum shock absorption combined with lightweight and faster prototyping and production processes create a unique possibility to increase the profitability of your business and the satisfaction of the end users.

Trocenen cross-linked PE foam → environmentally friendly, non-toxic and reusable.

Lightweight and long lasting shock absorption → maximum comfort for end users.

Breathable material through perforation process → increased breathability of the shoes.

Thermo moulding as alternative to injection → simplifies the prototyping and production processes, providing an improved quality and technical performance of the final product.

Wide range of application possibilities → from martial arts mats and sport products to almost every type of footwear and clothing applications.

Based on Trocenen Tatami technology for martial arts the shock absorbing properties of Trocenen Shockfree surpass the industry standards. Trocenen Shockfree was tested together with different types of PE and PU foams. Tests made by Ricotest, worldwide well known laboratory for footwear testing.



## HEEL ENERGY ABSORPTION

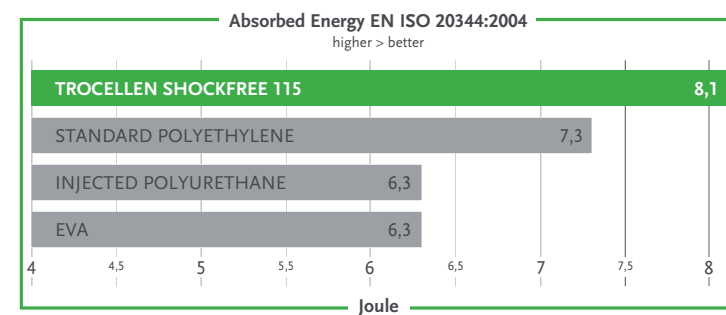
Test based on ISO standards for safety shoes (EN ISO 20344:2004)

**Minimum Required Values:** (values for entire shoes, not individual insoles)

Safety footwear: 20 Joule

Woman's town footwear: 10 Joule

Generic free time footwear: 10 -15 Joule (suggested by CEN/TC 309 Commission)



**Test Results:** (only individual insoles were tested)

Trocenen Shockfree as individual insole reached up to 8,1 Joule, reaching almost the minimum requirements needed for complete woman's town or free time footwear.

Shoes equipped with Trocenen Shockfree foamed insoles can easily reach the minimum requirements for impact shock absorption, offering designers the complete freedom for fashion trends.

Trocenen Shockfree. Maximum comfort based on safety and shock absorption.

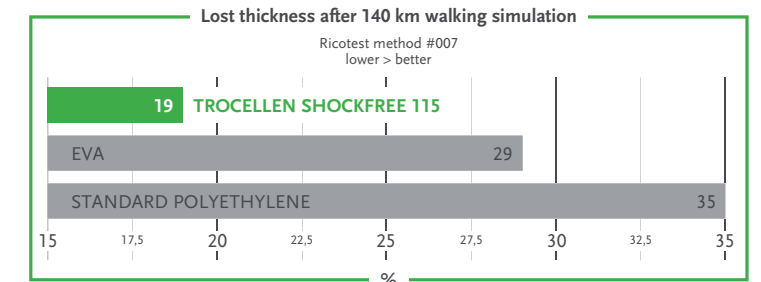
## LONG LASTING PERFORMANCE

Ricotest internal testing method (007)

This test simulates the compression set of the materials after 140 km of walking by a person with average weight. Simulation using 100.000 cycles applying 90 kPa pressure.

**Average Values:** Ricotest database shows that 29-35% range of compression set is the average percentage lost for most of the used foams in the market, while less than 20% is rare.

**Test Results:** The 19% reached by Trocenen Shockfree has almost never been performed by any foam used in the footwear market.



Trocenen Shockfree provides excellent compression set and long lasting performance surpassing the industry standards.

