

Polyurethane shoe soles - lightweight and versatile

Bayer MaterialScience's Italian polyurethane systems house BaySystems Italia offers three ranges for the footwear industry, Bayflex® Safety, Active and Fashion. These three ranges enable the production of soles that cover a broad spectrum of production requirements, such as a wide density range. Following a successful testing and trial period, this innovative system for the production of midsoles that are up to 15 percent lighter is progressing by leaps and bounds with customers in the safety sector. With its savings potential, outstanding processing properties and quality, this system offers customers increased comfort and gives the processors a crucial edge over the competition.

Another successful application of polyurethanes is a new class of polyester-based materials marked by their high resistance to hydrolysis. This enables the production of very long-life soles, which are in particular demand for safety shoes, also available in an electrostatic discharge (ESD) version that is very important for safety shoes in the electronics and automotive industries.

Polyurethane is used in manufacturing inserts and midsoles that adapt perfectly to the shape of the foot and are extremely lightweight, making the shoes very comfortable to wear. One of the main advantages of the material is its versatility – the elasticity, hardness and density of the end product can be defined in such a way that they meet all relevant requirements.

One excellent example is the decision to dispense with using halogenated blowing agents and tin compounds in formulations for the production of polyurethane soles. The Easy Release system offers a further advantage in terms of environmental protection as its special formulation reduces the amount of release agents needed in the mould.

Proof that polyurethane, can be fashionable, comfortable, improve safety, and aid environmental protection.

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For more information, please contact:

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