

# Original ShockStop

- **Provides protection, cushioning and support to reduce plantar pressures and shear forces**
- **Stabilises the feet and lower limbs**
- **Improves proprioceptive feedback, enhancing balance, reducing the risk of falls**
- **Improves comfort, reducing the risk of injury**
- **Can decrease foot pain and improve function to keep your patient active**
- **Can assist in reducing ankle, knee and other musculoskeletal pain**

## ShockStop foam is exclusive to Formthotics

Formthotics Medical Original ShockStop is made from a revolutionary foam material that absorbs shock and deflects impact more than most standard foams used in footwear and other foot orthoses. This material reduces impact shock during gait, reduces plantar pressure and improves comfort for your patients.

Original ShockStop offers huge benefits for patients with diabetes, fat pad atrophy, postural instability or those patients who are at risk of falls. ShockStop provides increased protection for bony prominences, cushioning, support, shock absorption and comfort.

The top layer of ShockStop foam is the revolutionary foam that absorbs impact significantly better than other foams or visco-elastic materials. The base is a Formax<sup>TM</sup> foam material, the same support and stability provided by other Formthotics products. The black material is equivalent to the blue medium density of other models.

ShockStop foam significantly reduces impact by spreading the force over a greater period of time and area. This dramatically reduces the impact shock associated with heel strike and then dissipates the plantar pressures throughout the entire gait cycle; reducing foot pain, improving stability and function, and enhancing comfort.

Original ShockStop is heat-mouldable and available from XXS size to XXL.



# The evidence

## Impact force tests

Independent drop tests comparing ShockStop material to others commonly used in insoles and footwear showed that ShockStop was superior in reducing impact forces (Fig. 1).

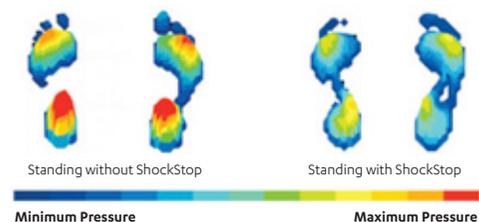
ShockStop material showed a significantly lower peak deceleration than Poron and significantly better capabilities in spreading the force of the impact over a greater period of time. Poron 'bottomed out' under the impact and was unable to absorb the energy of the impact (Fig. 2).

It is the unique resin that is in ShockStop, not the foam itself, that provides the shock-absorbing properties. This means that when the foam is already under compression, it is still able to reduce force.

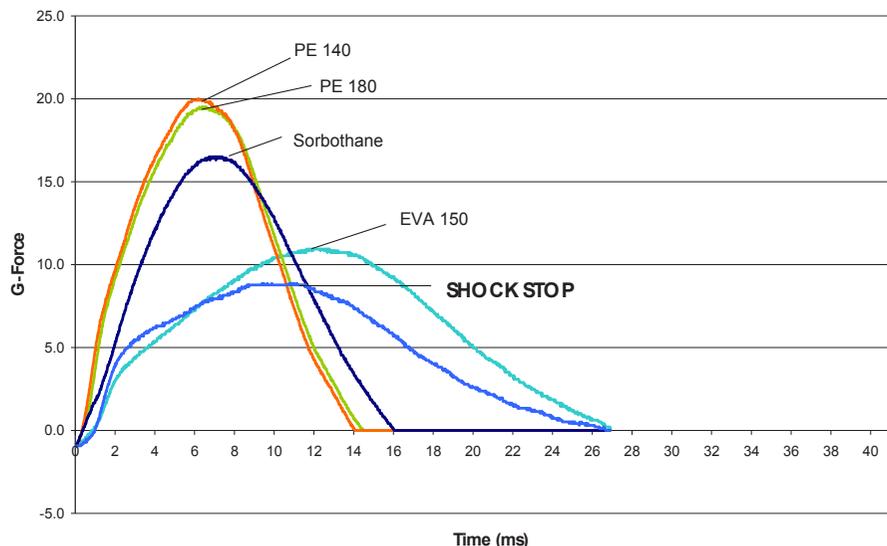
For the case of a runner or a walker, they will be taking new steps every second, generating a force impact from the ground with every step. It is essential that the material can handle continued impact and not 'bottom out'.

## Peak pressure management

Pressure mapping of the foot shows the difference between the support with Original ShockStop and without, while standing.

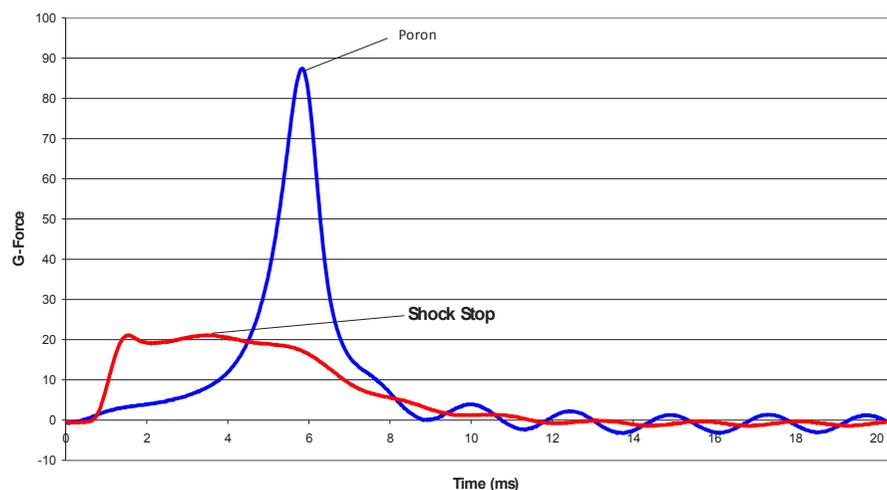


## Deceleration over time – ShockStop and other commonly used materials



**Fig 1:** Deceleration (Peak G force measured in Newtons) of an 8.5kg weight over time (milliseconds) of commonly used 25mm thick material. This shows time to peak deceleration where the material will recover or rebound back.

## Deceleration over time – A closer look at ShockStop and Poron



**Fig 2:** Deceleration (Peak G force measured in Newtons) of an 8.5kg weight over time (milliseconds) of ShockStop and Poron with a more realistic orthotic thickness of 5.6mm.

Impact tests assessed in accordance with American Standard ASTM F1614-1999

## Fitting Original ShockStop

Original ShockStop can be heat moulded in the same way as other Formthotics Medical products, by a trained medical professional who will customise the shape to each individual foot and shoe for a personal fit.

## A note on the ShockStop surface

ShockStop has a lower 'tear strength' than Polyethylene (Formthotics Formax™ foam). If a patient is known to produce a lot of shear in the way they move or their activity, a top cover placed over the top of ShockStop may be considered. This will help increase the durability of Original ShockStop. It is recommended to schedule your patient for a visit approximately every 6 months to ensure Formthotics are providing the comfort desired.

Regularly check the ShockStop surface for stones and debris to avoid rubbing. Formthotics can be cleaned by hand washing in warm water and detergent.

## Storing Original ShockStop

To ensure the longevity of Original ShockStop Formthotics while in storage, ensure that they are kept away from direct sunlight.

Please contact Foot Science International for a copy of the full lab report of the impact tests.



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