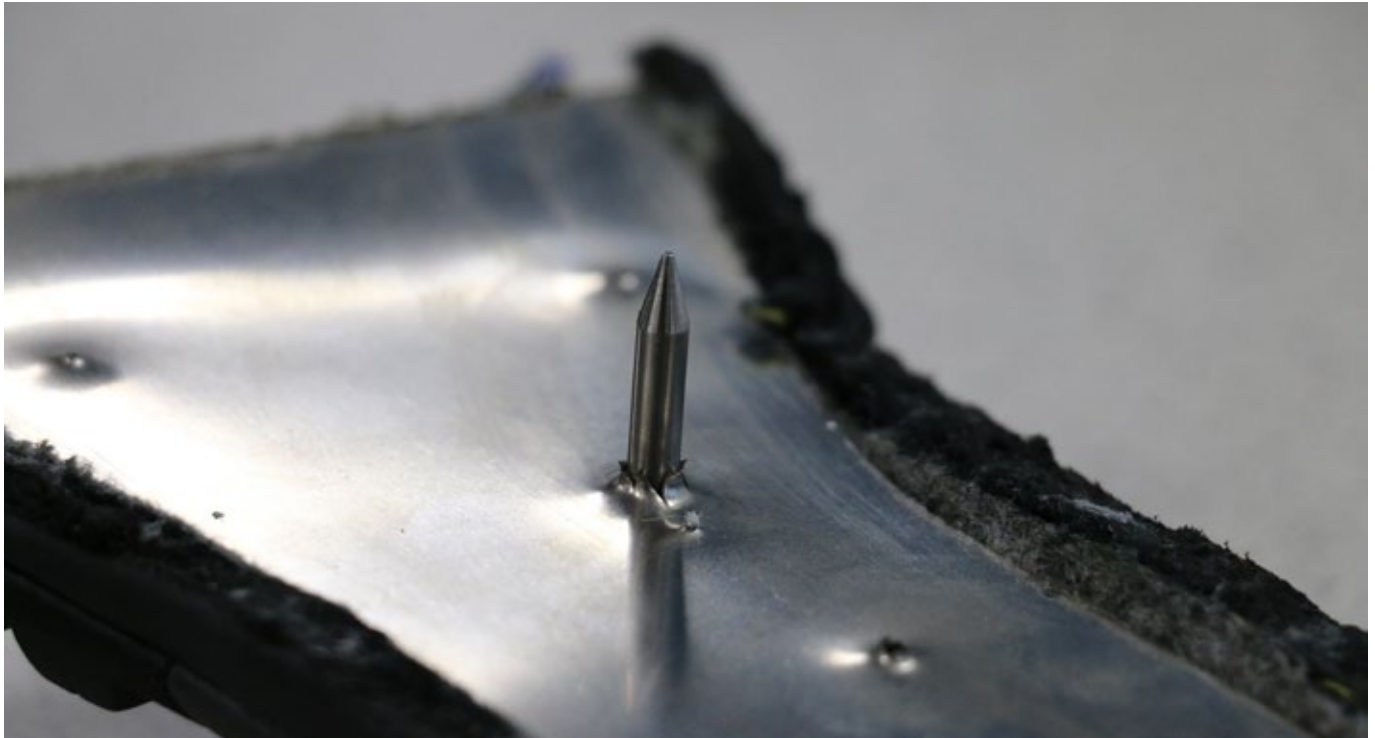


An **Expert Advice Sheet**

Steel Midsole Risk

www.arco.co.uk/BeSure



Background

The risk of sharp objects like nails and screws penetrating footwear is a significant one for many workers. A high proportion of Class 1 safety footwear* in the UK contains a protective midsole. The majority of which are steel.

Class 1 safety footwear with midsole protection against this risk must comply with a standard penetration test – the application of a nail to the sole with a force of 1100N, the equivalent of a well-built man stepping onto a nail – and a corrosion test – a cut test piece of the midsole is exposed to a 1% sodium chloride solution for 48 hours.

As a result SATRA state that it is likely that only stainless steel inserts will pass the corrosion test.

The Findings

Arco suspected that some footwear products available on the market had mild steel midsoles despite carrying CE marks. We decided to test the steel used in a range of different footwear brand midsoles.

- 7 out of the 14 inserts we tested were mild or carbon steels.
- The remaining 7 were made from high chromium, or stainless steel.

Why is this happening?

Some manufactures may not have responded to the change in EN20345, which now requires a tougher corrosion test for midsoles used in Class 1 safety footwear. It's also possible that key components could be substituted for cheaper ones during the manufacturing process. However, it is difficult for buyers to determine what kind of steel a midsole insert is made from without cutting it open and testing the composition of the metal used for the midsole.

What is Arco doing about this issue?

- All Arco own-brand Class 1 safety footwear containing metallic midsoles is specified with stainless steel corrosion-resistant midsole inserts.
- If any product fails a standard safety test we immediately take appropriate action.
- We will continue to ensure the manufacturing quality and compliance through our 5 Stage Product Assurance Process.
- We will continue to pass any product compliance data on to the BSIF.

* Class 1 safety footwear is footwear made of leather and other materials, excluding fully vulcanized or fully moulded products such as Wellingtons.

What to do now

- Ask suppliers to demonstrate that their midsole inserts are made from stainless steel.
- Ask suppliers about their process of quality assurance at the factory to ensure their products are being manufactured as they were originally certified.
- Ask suppliers about their process of sample testing to ensure safety products continue to meet the required standards.
- Always buy from a trusted source. When selecting your safety supplier, there's no room for doubt.

Further help

If you would like further information, please do not hesitate to call your Arco Sales Manager or visit www.arco.co.uk/BeSure



Frequently asked questions

Q: What was the problem with some midsole inserts?

A: Although the footwear had CE marks, tests revealed that 50% had midsole inserts made from mild steel, which could become weakened and brittle through corrosion over time. This could leave wearers at risk of suffering a penetrating foot injury.

Q: Was the failed footwear counterfeit products with fake certificates and markings?

A: No, the EC type approval and CE marks for compliance may be genuine. However, EC type approval is valid for the life of the product, so although the product may have received a pass at the test stage, they may not have been re-tested to meet more recent corrosion requirements.

Q: How can products have genuine markings but be so dangerous to use?

A: Products are tested and meet the required standard but over a period of time, the key components may have been changed without further testing. So the product may no longer offer the protection claimed.

Manufacturers and importers should carry out ongoing sample testing to ensure that production standards are maintained throughout the life of the products, sadly, this may not always be the case.

