

TECHNICAL GUIDANCE

STONE MINERAL WOOL INSULATION FOR FLAT ROOFING

Stone mineral wool insulation is used regularly in flat roofing for its acoustic, non-combustible and thermal insulation properties. The Single Ply Roofing Association (SPRA) and National Federation of Roofing Contractors (NFRC) wish to raise awareness that not all stone mineral wool insulation products are suitable for use in a flat roofing system, however, for reasons of insufficient compressive strength; addition of a facing by a third party; and/or alteration by a third party.



INSUFFICIENT COMPRESSIVE STRENGTH

Stone mineral wool insulation products are the subject of designated/harmonised standard BS EN 13162:2012+A1:2015 *Thermal insulation products for buildings – Factory made mineral wool (MW) products – Specification*. It is a legal requirement that essential product characteristics are declared in a Declaration of Performance. Compressive strength at 10% deformation is included in the specification and, therefore, where products are purposed for flat roofing the Declaration of Performance should include a declaration of CS(10)'X'. This identifies that the product has been tested to BS EN 826 *Thermal insulating products for building applications – Determination of compression behaviour*, with the stress at 10% deformation being value 'X'.

Stone mineral wool insulation used in a flat roofing system should have sufficient compressive strength to withstand dead and live loads applied during installation and use. Note that 'use' could be limited to access for maintenance and repairs.

SPRA Component Quality Standards (CQS) set a benchmark of performance for products used in a single ply roofing system. They define minimum technical standards and are a vital aid to specification. SPRA CQS 04 *Stone Mineral Wool Insulation Boards for Flat Roofing* stipulates a minimum compressive strength of

≥70kPa at 10% deformation. In mechanically fastened systems, it is recommended to use telescopic washers to prevent puncturing of the waterproof layer caused by foot traffic. Consider also the installation of supported, designated walkways across heavily trafficked routes.

SPRA and NFRC are aware that there are stone mineral wool insulation products being used in flat roofing systems that do not have sufficient compressive strength for this application. The use of a cover board would improve resistance to point load, but would offer no benefit under uniformly distributed loads. SPRA and NFRC require that even when a cover board is used, stone mineral wool insulation achieves a minimum compressive strength of ≥70kPa at 10% deformation.

Although a product may be the subject of other third-party certification that confirms its fitness for purpose, the Declaration of Performance shall be presumed to be accurate and reliable. Where the declared value of 'X' is ≥70kPa, the requirement of SPRA CQS 04 is met.

ADDITION OF A FACING BY A THIRD PARTY

An unfaced stone mineral wool insulation product (and those with a fleece or tissue facing applied by the original manufacturer) is typically classified A1 or A2-s1, d0 in accordance with BS EN 13501-1 *Fire classification of construction products and building elements. Part 1: Classification using data from reaction to fire tests*. The addition of a facing by a third party may add calorific potential to a flat roofing system. It should not be assumed that the original product's Reaction to Fire classification applies. A change to the original product's Reaction to Fire classification would represent a modification in such a way that conformity with the original manufacturer's Declaration of Performance may be affected. Refer to *Construction Products Regulations* below.

ALTERATION BY A THIRD PARTY

Stone mineral wool insulation boards may be purchased by a third party to fabricate a product with a bespoke thickness, or tapered boards. This may involve cutting boards and/or using an adhesive to laminate them.

Cutting a board could compromise its compressive strength and dimensional stability. This risks damage during transport, handling, installation, and use. Stone mineral wool manufacturer members of SPRA and NFRC

recommend a minimum thickness of 30mm – unless fully supported in use – to ensure that product characteristics are maintained. The use of an adhesive to laminate boards may add calorific potential to a flat roofing system. It should not be assumed that the original products' Reaction to Fire classifications apply.

A change to the original products' compressive strength, dimensional stability and/or Reaction to Fire classifications would represent a modification in such a way that conformity with the original manufacturer's Declaration of Performance may be affected. Refer to *Construction Products Regulations* below.

CONSTRUCTION PRODUCTS REGULATIONS

In accordance with the Construction Products Regulations of the [European Union](#) and [Great Britain](#), an Importer or Distributor – a third party – shall be considered a Manufacturer and shall be subject to the obligations of a Manufacturer where it places a product on the market under its name or trademark or modifies a construction product already placed on the market in such a way that conformity with the [original manufacturer's] Declaration of Performance may be affected. The obligations of a Manufacturer include drawing up a Declaration of Performance and affixing the CE or UKCA marking.

Note that a manufacturer (including a third-party Importer or Distributor) may refrain from drawing up a Declaration of Performance when placing a construction product covered by a designated/harmonised standard on the market where the construction product is **individually manufactured or custom-made in a non-series process in response to a specific order**, and installed in a single identified construction work, by a manufacturer who is responsible for the safe incorporation of the product into the construction works, in compliance with the applicable national rules and under the responsibility of those responsible for the safe execution of the construction works designated under the applicable national rules.

FURTHER READING

- **Declarations of Performance and Conformity Assessment Marking** Single Ply Roofing Association/ National Federation of Roofing Contractors, May 2025
- **CQS 04 Stone Mineral Wool Insulation Boards for Flat Roofing** Single Ply Roofing Association, April 2023

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