It is apparent that builders and specifiers do not always possess an adequate understanding of the functions and varying properties of products generically referred to as ‘fire foam’. They look similar and are usually tinted pink to distinguish them from other foam products, but there is much more to consider than a name and a colour when determining their suitability.

**Misuse of foam filler**

PU foams are combustible and work by filling small linear gaps or service penetrations, with the total element being proved by test to achieve set fire-resistant standards.

Misuse of PU foam

It is often assumed that fire foams can be used to fill large voids or openings to provide a fire-stopping function. This is incorrect. Foams will only offer fire-stopping properties when used in narrow voids or gaps. In all cases, it is important to check what independent third-party tests have been carried out to show its suitability.

**Testing**

PU foam products, which are to be used in linear gap or service penetration applications, must have their fire performance determined by testing to standards BS 476 Part 20/22 and BS EN 1366-4 for linear gaps and BS EN 1366-3 for service penetration seals. In many instances, supporting evidence states that the foam has been tested as part of a system, usually in combination with a backing material such as mineral fibre. What is often not known is how much of the fire resistance claimed for the system can be attributed to the foam filler or the backing material. In other words, the same fire resistance may have been achieved if only the backing material were employed in the same circumstances.

Most PU foams are only suitable where the gaps to be filled are 10-30mm wide, such as bed and side joints to lintels, frames and minor penetrations in blockwork walls or concrete floors. Gaps that require filling in timber structures are not likely to achieve satisfactory fire-resistant results.

However, it should be borne in mind that some fire-resistant foams are designed and tested to fill larger gaps. It is imperative that anyone installing a fire-rated foam product ensures the conditions of use stated in the certification are closely followed.

**Conclusion**

When encountering expanding foams in situ, it cannot be assumed they will provide the required fire resistance. In all cases, proper supporting evidence should be obtained that supports their use in specific situations. Installers should be made aware of the proper use of PU foam and encouraged to read manufacturers’ conditions of use.
Key points to consider
• It is important that PU foams are used correctly and in the right situations
• PU foams look similar to and are usually tinted pink to distinguish them from other foam products
• PU foams are combustible and work by filling small linear gaps or service penetrations
• Most PU foams are only suitable where the gaps to be filled are 10-30mm wide
• Ensure there is supporting evidence to show their use in specific situations

Further guides
BS 476 Part 20/22 and BS EN 1366-4 for linear gaps
BS EN 1366-3 for service penetration seals