

Wonderbuilds BROOF (t4) Flat Roofing System

Understanding BROOF (t4) in the UK Roofing Industry

BROOF (t4) is a fire performance classification standard for roofs in the UK, part of the broader Euroclass system defined under BS EN 13501-5. It ensures that roofing systems demonstrate effective resistance to the spread of fire from external sources. Compliance with BROOF (t4) is often a critical requirement for projects, particularly in densely populated urban areas or commercial developments where fire safety is paramount.

Why BROOF (t4) Matters

When bidding on a project, it is crucial to ensure that the roofing system offered is 100% tested and certified under BROOF (t4). This means that the entire build-up, from the waterproofing membrane to the insulation and underlying elements, has been subjected to and successfully passed the BROOF (t4) test using a notified laboratory. Offering partially tested systems or assuming compliance based on individual component certifications can lead to non-compliance issues, rework costs, or even disqualification from tender opportunities.

How the BROOF (t4) Test Works

The BROOF (t4) classification is achieved by conducting specific fire tests simulating external fire exposure. These tests assess the ability of a roof system to limit flame spread, resist fire penetration, and reduce heat output. The testing is typically carried out in controlled conditions and involves the following:

1. Ignition source: a calibrated flame source is placed at a specific distance from the roof system;
2. Wind simulation: in some cases, simulated wind conditions are introduced to assess how flames may propagate across the roof;
3. Heat source: a radiant panel is placed at a specific distance from the roof system to simulate solar radiation;
4. Time and heat measurement: the spread of fire, time to penetration, and heat emissions are monitored;
5. Roof pitch: standard test pitch is 45°, except where the specimens represent flat roofs (with a pitch up to 10°) and shall be tested horizontally. Tests may also be undertaken at the intended pitch. In this case, the classification obtained is valid for that pitch only.

The system passes the BROOF (t4) test if it limits fire spread and does not allow the flames to breach the roof structure for a defined period.

Origins and Compliance

The BROOF (t4) standard aligns with European harmonized testing requirements and has its roots in harmonization efforts across the EU to standardize fire safety regulations. While other Broof classifications (like Broof(t1), (t2), and (t3)) exist, Broof(t4) is the most stringent, often mandated for high-risk areas or projects requiring the highest fire safety assurances. Key Takeaways for Your Sales Force:

- Complete System Testing: Ensure that the entire roof build-up proposed for any bid is certified under BROOF (t4). Partial testing or reliance on assumptions is unacceptable;
- Documentation: Always provide test certificates from accredited testing bodies to demonstrate compliance;
- Competitive Advantage: Highlight BROOF (t4) compliance as a value proposition, emphasizing the safety, durability, and regulatory adherence of the offered system.



Further Information

View our full range of products and systems at www.wonderbuilds.co.uk
You can also contact us at [0208 208 2121](tel:02082082121), or at admin@wonderbuilds.co.uk