

Whitepaper 6

Long-Term Load and Creep Performance of SIP Panels

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Executive Summary

Studies confirm SIPs maintain strength and recover after long-term creep loading, ensuring reliability.

The Challenge: Long-Term Loads

Designers must consider creep in SIP roofs and floors. Data was historically limited.

The Solution: Tested and Proven Creep Resistance

FPL and SIPA studies showed 90–100% strength retention and 97–99% recovery after unloading.

Evidence

Higher foam density improved strength; absence of foam discontinuities doubled capacity.

Relevant Standards (NEN/EN/ISO)

• NEN-EN 1995-1-1 – Timber structures • NEN-EN 14509 – Sandwich panels mechanical properties • NEN-EN ISO 9229 – Thermal insulation terms (long-term behavior) • NEN-EN ISO 6892 – Mechanical testing of materials

Conclusion

SIPs deliver dependable long-term performance under sustained load.

Call to Action

Contact Quacent B.V. for long-term performance data at www.quacent.eu or info@quacent.eu.