



About Lucideon

A world-leading independent materials, technologies and processes testing laboratory based in Stoke-on-Trent. UKAS (United Kingdom Accreditation Service) approved.

After constructing a wall and coating it with Stormdry® Cream, Lucideon placed the wall in a hygrothermal chamber to test its heat-retention abilities through extreme weather conditions over a simulated period of 25 years.

About Stormdry®

Stormdry® Masonry Protection Cream is a silicone cream for brick, masonry, mortar and concrete. It provides a breathable, fully waterproof coating that penetrates deeply into brickwork to last at least 25 years. But don't take our word for it. Let's see how it did!

The Tests

Weathering

A hygrothermal chamber simulates weathering by exposing objects placed inside it to heat, cold and wet conditions. In this case, a standard brick wall was subjected to cyclic heat-rain conditions, followed by wet-freeze-thaw cycles. This was done for enough cycles to simulate 25 years of natural weather conditions.

One portion of the brick wall was left uncoated. Another portion was coated with a single layer of Stormdry® Cream.

Breathability

5 square assemblies of brick and mortar were coated with Stormdry® Cream alongside 5 untreated specimens. Following the weathering test, 5 square specimens were cut from the wall. These samples were submerged in water and stored in an environmentally controlled chamber. The test aimed to see if water vapour could pass through the Stormdry®-coated surface whilst it stays dry. Breathability is vital for managing humidity levels inside the home to prevent excess levels of condensation.

Water Absorption

The front face of each specimen cut from the weathered wall was submerged in water and its moisture content was calculated. An uncoated sample was also placed in water as a control sample.

The Results

Following 25 Years Weathering Tests:

| UNTREATED WALL | TREATED WALL |
|---------------------|---------------|
| Water penetration ❌ | No damage ✅ |
| Frost damage ❌ | No damage ✅ |
| Brick cracks ❌ | No cracks ✅ |
| Spalled brickwork ❌ | No spalling ✅ |

Following Breathability Tests:

In comparison with untreated brick, the Stormdry®-coated brick allowed water vapour to pass through the substrate.

Following Water Absorption Tests:

Stormdry® Cream reduces water absorption by 95.1% compared to the uncoated brick samples.



25-YEAR PROTECTION



REMAINS BREATHABLE



SURFACE BEADING

The Verdict is in!

Thermal Performance Enhancement

Reducing water ingress leads to thermal performance benefits. During the hygrothermal weathering test, Lucideon recorded 4°C more heat loss in uncoated bricks when compared to bricks coated with Stormdry® Cream.



TESTED TO:
BS EN
16383:2016
DETERMINATION OF HYGROTHERMAL BEHAVIOUR

Weather Damage Protection

Stormdry® Cream shields brick walls from frost and heat damage. During the hygrothermal weathering test, the uncoated side of the wall showed signs of frost damage and weather-related spalling that Stormdry® Cream prevented.



TESTED TO:
ETAG
034:2012
THERMAL INSULATION PRODUCTS FOR BUILDING APPLICATIONS

Optimised Moisture Management

Stormdry® Cream protects against penetrating damp while allowing moisture to pass through walls. This means Stormdry® Cream will not contribute to excess humidity in the home and helps to prevent black mould growth.



TESTED TO:
BS EN ISO
7783:2011
WATER VAPOUR TRANSMISSION

