



# PLUS

## NEW PLUS RANGE

ENERGY SAVING SOLUTION\*



**\*Helping to cut heat loss through solid walls  
and improve comfort levels for occupants.**

## INNOVATIVE COATINGS WITH REVOLUTIONARY BENEFITS

Introducing new **Dulux Trade Plus**, innovative coatings with revolutionary benefits to enhance buildings; helping you to create spaces that are not only beautiful but also more comfortable and energy efficient.

The new **Dulux Trade Plus** range was born out of listening to the needs and future ambitions of our customers, and builds on our already strong commitment to sustainability and Planet Possible, the global **AkzoNobel** initiative to create a brighter future by delivering more value from fewer resources.

The new innovative products in the **Dulux Trade Plus** range have been specially developed to help to improve energy efficiency in buildings—cutting heat loss through walls, delivering energy savings and improving comfort levels.



**Susan Kendall**  
Sustainability Director, AkzoNobel  
Decorative Paints UK & Ireland



“Increasingly our customers want to create spaces that are energy-efficient places where people will thrive. This has led us to create **Dulux Trade Plus**, an innovative range of coatings that are easy to apply and offer independently-tested performance.”

## LACK OF SOLID WALL INSULATION

In the UK, homeowners and businesses are losing millions of pounds every year due to heat loss through uninsulated solid wall construction.

### AGEING BUILDINGS

The UK has one of the oldest, most inefficient built environments in Europe. Nearly a third of buildings are of solid wall construction, the majority of which are typically older properties built before 1919.

### RISING COSTS

Increasing energy prices are placing a greater burden on everyone—including private, residential and commercial customers.

### WASTED ENERGY

The majority of energy consumption comes from heating and cooling: Approximately two thirds in the average home and half in the average commercial building.

### INSIDE AND OUT

Already poor insulation in buildings of solid construction can be compounded by moisture trapped in brick work, which reduces the thermal efficiency of the wall causing more heat to escape. Potentially an issue for some properties in a high wind driven rain index zone.

Heat loss through solid walls wastes up to 45% of heating energy—wasting money for their occupants or owners, as well as reducing comfort.



Note:  
“Approximate wind driven rain” equates to “maximum wall spell index” derived from Figure 1 in BS 8104: 1992 (Code of practice for assessing exposure of walls to wind driven rain.)

The wall spell index can be more accurately calculated from the large scale maps and correction factors given in BS 8104, then interpreted using the values in the key to the Map (above)

Key  
Exposure zones  
approximate wind driven rain (l/m<sup>2</sup> per spell)  
less than 56.5  
equal to or greater than 56.5



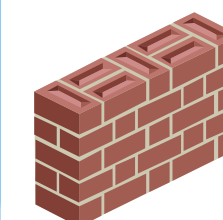
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## WHY IS SOLID WALL CONSTRUCTION SO INEFFICIENT?

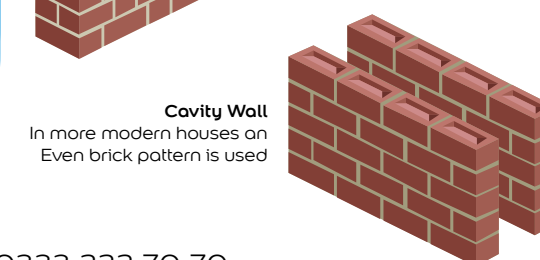
Modern walls have insulation cavities, often filled with insulating material, that captures and retains heat. Solid walls have no insulation.

### MOISTURE ONLY MAKES IT WORSE.

Three quarters of exteriors are undecorated—walls with a higher moisture content release significantly more heat than those with a lower moisture content.



**Solid Wall**  
In most pre 1919 homes a Thick-thin pattern was used



**Cavity Wall**  
In more modern houses an Even brick pattern is used



# INTRODUCING DULUX TRADE PLUS THERMACOAT+

Create warmer, more comfortable spaces with a **permanent system** that improves thermal performance, cuts heat loss and reduces warm-up times.

**Dulux Trade Plus ThermaCoat+** is a revolutionary new 3-part coating system proven to cut heat loss and increase energy-efficiency.

The innovative system enables building owners to enhance spaces, improving occupants comfort, whilst saving money on heating and supporting sustainability targets.



PRODUCT SYSTEM FEATURES

- Reduces heat loss through solid walls by up to 18%\*
- Improves room warm up times
- Independently tested thermal conductivity (λ) of 0.05 W/mK
- Minimal disruption to wall fittings
- Leaves a flat smooth finish ready for painting
- Certified by the BBA, and tested by the Building Research Establishment (BRE)

\*BRE laboratory tests in a matched pair of test cells with wall U-values equivalent to a standard solid brick wall (220 mm) showed that a 5.5 mm coating of **Dulux Trade Plus ThermaCoat+** system would reduce the heat loss through the walls by approximately 18%.

## DULUX TRADE PLUS THERMACOAT+ 3-PART SYSTEM

PART 1

Dulux Trade Plus ThermaCoat+

Innovative basecoat with insulation properties

Thickness: 5mm (when levelled)

Spreading Rate: 5L/m<sup>2</sup>

Drying Times: Overnight (Minimum 12 hours)

Application: Internal side of exterior facing walls\*

Tools: Dulux Trade Plus ThermaCoat+ Comb

Dulux Trade Plus Loading Tool

PART 2

Dulux Trade Plus Levelling Fleece

Strong high quality fibreglass fleece, used to level and smooth Dulux Trade Plus ThermaCoat+ (part 1)

Length: 25m roll, 1m wide.

Tool: Dulux Trade Plus Leveling Tool

PART 3

Dulux Trade Plus Smooth & Protect+

Protective mid coat for use over Dulux Trade Plus ThermaCoat+ & Dulux Trade Plus Levelling Fleece

Thickness: 1mm (wet)

Spreading Rate: 1L/m<sup>2</sup>

Drying time: Minimum 12 hours, before lightly sanding & painting

Tool: Plastering spatula or flat trowel

Please note the system can take up to 7 days to fully cure.

\*Not suitable for use in areas where condensation is a problem e.g. kitchens & bathrooms. Please see technical data sheet for full information.

# INSULATION PERFORMANCE

Proven to reduce heat loss and deliver energy savings.

**Dulux Trade Plus ThermaCoat+** has a proven thermal conductivity (λ) value of 0.05 W/mK, as tested by the BBA. From this the U-Value, measuring insulation performance, can be calculated.

EXAMPLE; TYPICAL SOLID WALL CONSTRUCTION U-VALUES
Without <b>Dulux Trade Plus ThermaCoat+</b> — 2.1 W/m <sup>2</sup> K*
With <b>Dulux Trade Plus ThermaCoat+</b> — 1.74 W/m <sup>2</sup> K*
<b>Dulux Trade Plus ThermaCoat+</b> delivers a 17.4% improvement

\*BRE SAP Modelling; thermal modelling software TRISCOV12 was used, to model the elemental U-value of the typical external brickwork wall 'pre' and 'post' application. See report summary for more detail.

SAP Modelling; Report Number: P106969-1000 Issue: 2



## POTENTIAL SAVINGS

BRE SAP modelling was undertaken on three BRE Standard House Types (Period Detached, Period End Terrace, and Period Mid-terrace), to explore the potential improvements in running costs and energy use. Potential savings can be seen in the adjacent table.

The modelling also showed a potential 6.6% increase in the minimum internal surface temperature with **Dulux Trade Plus ThermaCoat+** applied, which would help reduce the internal surface condensation risk.

POTENTIAL ANNUAL SAVINGS*	
Detached	£124
Mid Terrace	£63
End Terrace	£92

\*Potential savings are intended as a guide only and are not to be relied upon.

## DULUX TRADE PLUS THERMACOAT+ SYSTEM APPLICATION

STEP 1

Apply Dulux Trade Plus ThermaCoat+

Working in 1.5m sections apply an approx. 1cm thick layer of **Dulux Trade Plus ThermaCoat+** using the **Dulux Trade Plus ThermaCoat+** Comb from the bottom of the wall to the top.

STEP 2

Apply Dulux Trade Plus Levelling Fleece

Place the **Dulux Trade Plus Levelling Fleece** over the area and gently push onto the surface until it adheres. Use the **Dulux Trade Plus Levelling Tool** to gently distribute the coating, spreading an even layer across the substrate. **Leave to dry overnight (min. 12 hrs).**

STEP 3

Apply Dulux Trade Plus Smooth & Protect+

Apply a thin (1mm) layer of **Dulux Trade Plus Smooth & Protect+** using a plastic spatula to provide a tough, durable finish.

FINISHING

Finishing/Decoration

Once dry, lightly sand with very fine (240+ Grit) sandpaper and paint with any suitable water-based interior **Dulux Trade** emulsion.

Please ask for details on **Dulux Academy** Training.

Please note the system can take up to 7 days to fully cure and gain full strength.

# BRE DULUX TRADE PLUS THERMACOAT+ SYSTEM

## TEST 1 MOCK UP ROOMS

Full scale laboratory test in a matched pair of realistic mock-up rooms with walls equivalent to a standard solid brick wall (210mm), with a U-Value of around 2.1W/m²K.

Testing showed a calculated reduction in heat loss of 18% at 5.5mm **Dulux Trade Plus ThermoCoat+** system coating thickness.



### KEY RESULTS:

Testing showed a calculated reduction in heat loss of **18%** at 5.5mm **Dulux Trade Plus ThermoCoat+** system coating thickness

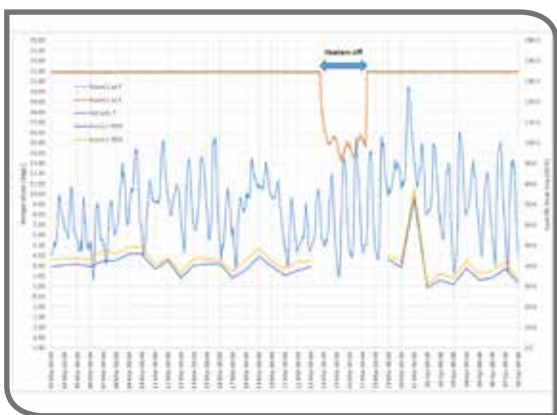
Application of **Dulux Trade Plus ThermoCoat+**

Thermal Image of Outside Mock Up Room Wall

Test 1 - Chambers (Dulux Trade Plus ThermoCoat+); Report Number: P103840-1001 Issue: 1

## TEST 2 BRE TEST HOUSE

Full-scale test of **Dulux Trade Plus ThermoCoat+** system in a matched pair of rooms in a proper BRE test house building with standard brick cavity walls (estimated U-Value 1.44 W/m²K). The tests were designed to provide side by side real comparative testing of a room with uncoated walls against a room with the two exterior walls coated with **ThermoCoat+** system.



### KEY RESULTS:

**14.3%** estimated improvement of U-Value by adding **Dulux Trade Plus ThermoCoat+** system the walls

**23%** improvement in heat up time

**7.15%** overall reduction in total room heat loss

External view of building

Test 2 - Mean room and outside air temperatures and mean daily W/K heat loss

Test 2 – House (Dulux Trade Plus ThermoCoat+); Report Number: P106932-1001 Issue: 1

# BBA DULUX TRADE PLUS THERMACOAT+ SYSTEM

The **Dulux Trade Plus ThermoCoat+** System has been certified by the BBA, (certificate 17/5445).

### Certification Includes:

- Factors relating to compliance with Building Regulations where applicable
- Factors relating to additional non-regulatory information where applicable
- Independently verified technical specification
- Assessment criteria and technical investigations
- Design considerations
- Installation guidance
- Regular surveillance of production
- Formal three-yearly review

### Key Factors Assessed;

- Thermal Performance
- Condensation
- Behaviour in relation to fire
- Durability



Please see BBA certificate for further details.



## CE MARK

**Dulux Trade Plus ThermoCoat+** and **Dulux Trade Plus Smooth & Protect+** have been CE Marked under Construction Products Regulation (CPR) (305/2011).

They have been tested and CE Marked in accordance with EN 15824 Specifications for external renders and internal plasters based on organic binders.

### Reaction to Fire

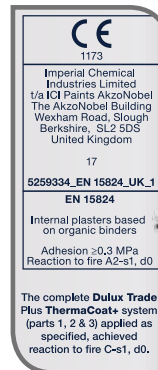
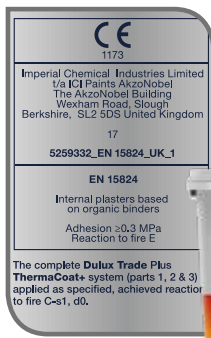
Reaction to fire testing was carried out by Warrington Fire Gent:

- **Dulux Trade Plus ThermoCoat+** complete system as specified (parts 1, 2 & 3 only): Class C-s1, d0 (EN 13501-1:2007+A1:2009)
- **Dulux Trade Plus ThermoCoat+** (part 1): Class E (EN 13501-1:2007+A1:2009)
- **Dulux Trade Plus Smooth & Protect+** (part 3): Class A2-s1, d0 (EN 13501-1:2007+A1:2009)

### Adhesion

**Dulux Trade Plus ThermoCoat+** & **Dulux Trade Plus Smooth & Protect+** both achieved adhesion test results  $\geq 0.3$  MPa

Please note **Dulux Trade Plus ThermoCoat+** system is not a fire upgrade system. The **Dulux Trade Plus ThermoCoat+** System should always be applied as a full system as specified (parts 1, 2 & 3)





# INTRODUCING DULUX TRADE PLUS SMARTSHIELD+

Protects undecorated exteriors, maintains their natural beauty and boosts energy efficiency.

## PRODUCT FEATURES

- Reduces water-ingress\*
- Clear-coating providing invisible protection
- Breathable†
- Designed for fast spray application
- Certified by the BBA, and tested by the BRE
- Reduces risk of damage caused by rain and Freeze Thaw cycle
- Protection for up to 10 years
- Resistant to the effects of UV damage

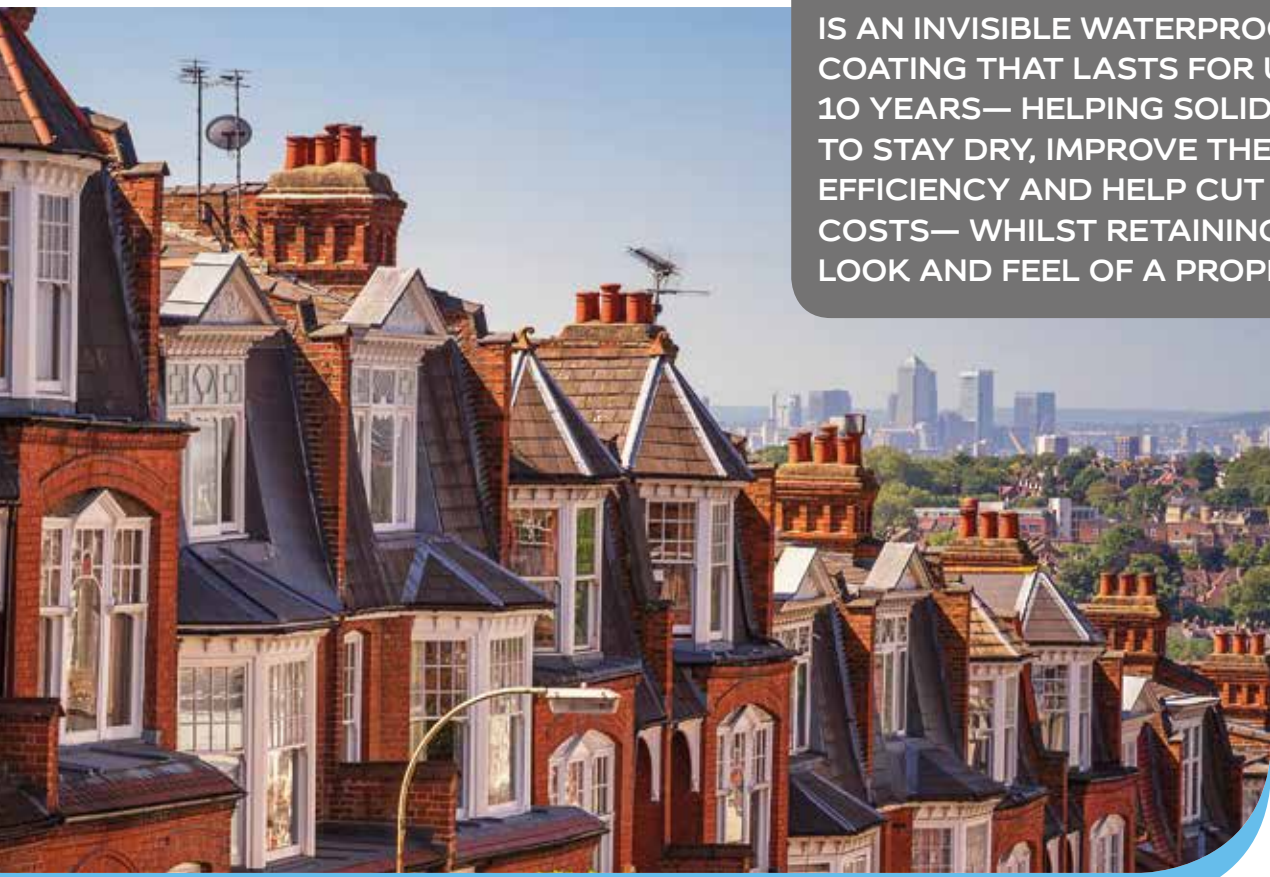
In the UK approximately three quarters of home exteriors are undecorated, and therefore are exposed to the elements. Solid walls with a higher moisture content release significantly more heat than those with a lower moisture content. This is therefore potentially a concern for some beautiful, but highly energy inefficient older properties with solid wall construction, in high wind driven rain index zones.

In response to this, we have launched **Dulux Trade Plus SmartShield+**, an exterior waterproofing coating that has been specifically formulated to reduce water ingress into substrates without sealing the surface, helping substrates breathe and dry-out, maximising their thermal efficiency.

**Dulux Trade Plus SmartShield+** provides invisible protection against the risk of damage caused by rain and freeze thaw cycle, helping building exteriors maintain their natural beauty.

**DULUX TRADE PLUS SMARTSHIELD+ IS AN INVISIBLE WATERPROOFING COATING THAT LASTS FOR UP TO 10 YEARS— HELPING SOLID WALLS TO STAY DRY, IMPROVE THERMAL EFFICIENCY AND HELP CUT ENERGY COSTS— WHILST RETAINING THE LOOK AND FEEL OF A PROPERTY.**

\*Dulux Trade Plus Smartshield+ allows moisture contained within a wall to leave in the form of water vapour. † Compared to untreated substrates.



# THERMAL PERFORMANCE

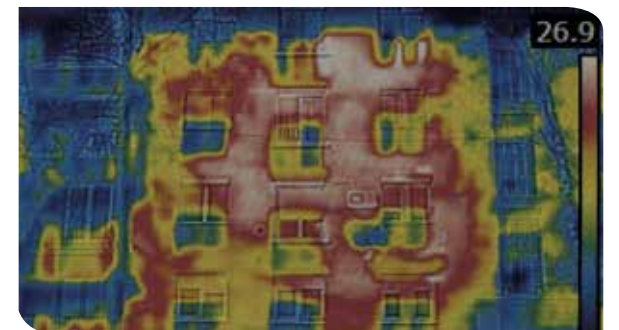
Helps to cut heat loss by reducing moisture content in walls of solid construction.

As **Dulux Trade Plus SmartShield+** penetrates brickwork, it does not have a thermal conductivity ( $\lambda$ ) value of its own.

The moisture level within brickwork does affect the U-Value. For a typical wall of solid construction with moisture content of 10%— which you might find in properties in a high index wind driven rain zone—the U-value would be  $2.46\text{W/m}^2\text{K}$  (The average moisture content of brickwork in the UK is assumed to be 5%).

If the moisture content was reduced to 3%, this would improve the U-value to  $1.93\text{W/m}^2\text{K}$  – a 21.5% improvement.

The **Dulux Trade Plus SmartShield+** works on its own or in combination with the **Dulux Trade Plus ThermaCoat+** System to provide both **external** and **internal** thermal efficiency improvement for solid wall constructions.



## EXAMPLE TO DEMONSTRATE THE IMPACT MOISTURE CONTENT HAS ON THE U-VALUE OF A WALL

A typical solid wall with a **10%** moisture content, would have U-value of  **$2.46\text{W/m}^2\text{K}^*$** .

A typical solid wall with a **3%** moisture content, would have a U-value of  **$1.93\text{W/m}^2\text{K}^*$**

If the moisture content of the wall were to be reduced to 3% from 10% this would be equal to a 21.5% improvement in thermal efficiency

# DULUX TRADE PLUS SMARTSHIELD+ APPLICATION

We recommend spraying for larger surfaces, using low pressure to avoid excessive mist/over-spray.

Carefully spray the product from the bottom of a surface up to the top to achieve maximum impregnation.

For best results, apply until substrate is fully saturated and sags/runs of 10–20cm appear.

**Application:** Low Pressure Spray, Brush or Roller

**Touch dry/Shower Resistant:** 30 minutes, dependent on temperature and humidity

**Recoat:** For very porous substrates apply two or three coats 'wet-on-wet', once the product has been fully absorbed (approximately 30 mins). Less absorbent surfaces may only need to be treated once.

**Coverage:** up to  $2\text{m}^2$  per liter per coat depending on application type and absorbency of substrate

**Drying times:** 1-2 hours.

**IDEAL FOR LOW PRESSURE SPRAY APPLICATION**



\*BRE SAP Modelling; thermal modelling software TRISCOV12 was used, to model the elemental U-value of the typical external brickwork wall. Report number; P106969-1000 Issue 1.



# BRE DULUX TRADE PLUS SMARTSHIELD+ TESTING

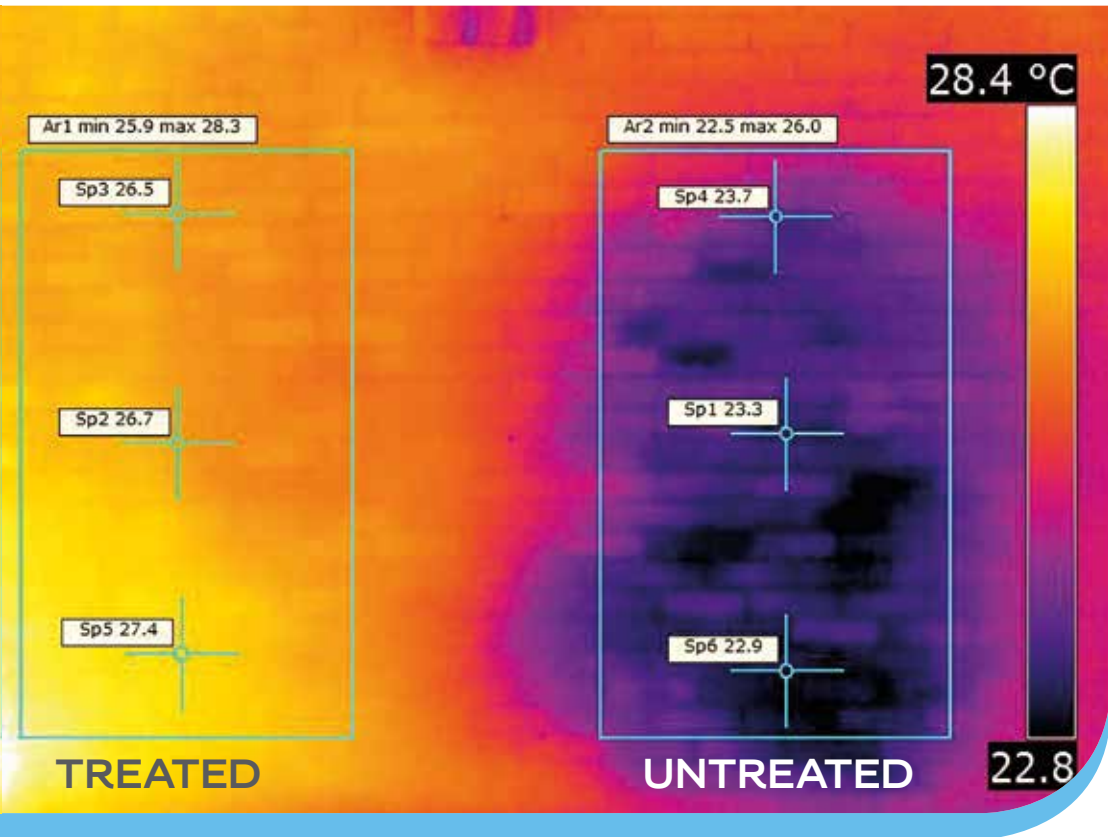
Testing was carried out to assess the effectiveness of **Dulux Trade Plus SmartShield+** on water penetration of masonry walls, by undertaking water spray tests (including simulated wind driven rain) on both a treated and an untreated section of brick wall in a BRE test house.



Test wall and spray apparatus



Spraying in progress



SmartShield; Report Number: P103840-1000 Issue: 1

# BBA DULUX TRADE PLUS SMARTSHIELD+ TESTING

**Dulux Trade Plus SmartShield+** has been certified by the BBA, (certificate 16/5351).

### Certificate Includes:

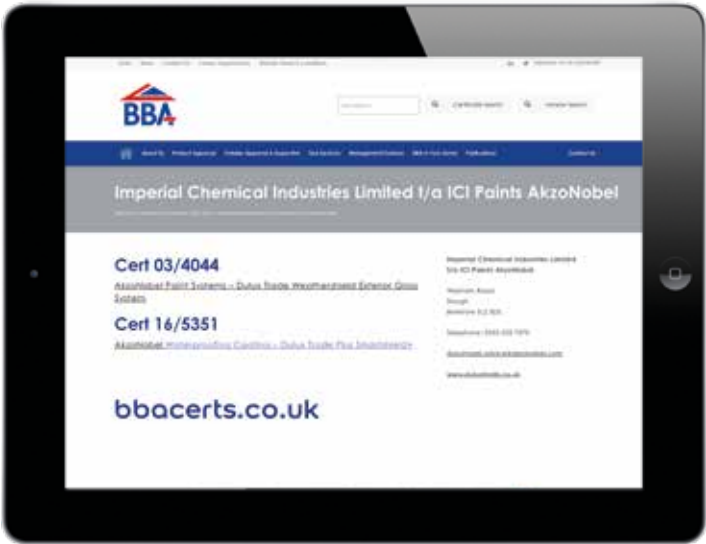
- Factors relating to compliance with Building Regulations where applicable
- Factors relating to additional non-regulatory information where applicable
- Independently verified technical specification
- Assessment criteria and technical investigations
- Design considerations
- Installation guidance
- Regular surveillance of production
- Formal three-yearly review

### Key Factors Assessed:

- Water penetration
- Condensation risk
- Freeze/thaw resistance
- UV resistance
- Durability



Please see BBA certificate for further details.





**Dulux Academy** is the home of painting and decorating excellence.

Our team of leading industry experts delivers learning experiences that celebrate our brand portfolio and proud heritage, showcase products and application innovation and embrace technology.

At every stage of the applicators' decorating career, our courses can deliver increased knowledge and understanding, enabling the applicator to meet their personal and professional ambitions.

Training courses are available for the New **Dulux Trade** Plus range products, please contact the **Dulux Academy** for details. Visit us at [duluxacademy.co.uk](http://duluxacademy.co.uk)

**Dulux Trade** is committed to **Planet Possible**, the global **AkzoNobel** initiative to create a brighter future by delivering more value from fewer resources.

**Planet Possible** is designed to drive innovation and promote radical resource efficiency, allowing ourselves and our customers to realise our sustainability ambitions together. At **Dulux Trade** we offer solutions that deliver positive sustainability benefits, as well as reducing our products' environmental impact.

We're working to make longer lasting, lower maintenance finishes so that less paint is needed, and we offer water-based alternatives to traditional solvent-based products – a breath of fresh air for everyone involved. To find out more about our **Planet Possible** activities and progress, check out [duluxtrade.co.uk/pp](http://duluxtrade.co.uk/pp).

## PROVIDING ALL THE SUPPORT YOU NEED

### Site Surveys

Specifier Account Managers can carry out a full site inspection. This will include assessment of the current condition of surface coatings, help with identification of difficult substrates and advice on extending maintenance cycles.

### Specification Writing

**Dulux Trade** offers full specification support tailored to your individual requirements. This will ensure that correct preparation is highlighted and the products specified are the most appropriate for the location, environment and substrate type.

### Contract Meetings

Specifier Account Managers can attend pre-contract, project review and post-contract assessment meetings, ensuring collaboration and clear communication from concept to completion.

### Site Visits

During the course of the work, if required, site visits can be made to ensure that work is being carried out correctly and in accordance to the specification.

### Report to Project Owners

A critical element of any project is minimising down time. Knowing the status of the work in progress and thus keeping control of events is equally important.

The Specifier Account Managers will ensure that Property Managers are kept closely informed about the status of all work in progress.

### Colour Service

For larger painting projects, we can offer **Dulux Trade** Colour Consultants who provide help and advice on colour and may use **Dulux** Previews, our unique colour specification software.

### Health and Safety

We can help and advise on Health and Safety issues relevant to the use of **Dulux Trade** products.

### Waste Management

Waste from completed work can be disposed of safely and quickly with our wash systems and recycling services. **Dulux Trade** Customer service team can advise on the best solution for your needs.

To discuss further the specifics of your project and how **Dulux Trade** can help you, contact your local **Dulux Trade** Specifier Account Manager or email us at [duluxtrade.advice@akzonobel.com](mailto:duluxtrade.advice@akzonobel.com)

### Interact with Dulux Trade



### Contact Us

For more information or technical advice please contact **Dulux Trade** Technical Advice Centre on **0333 222 70 70**