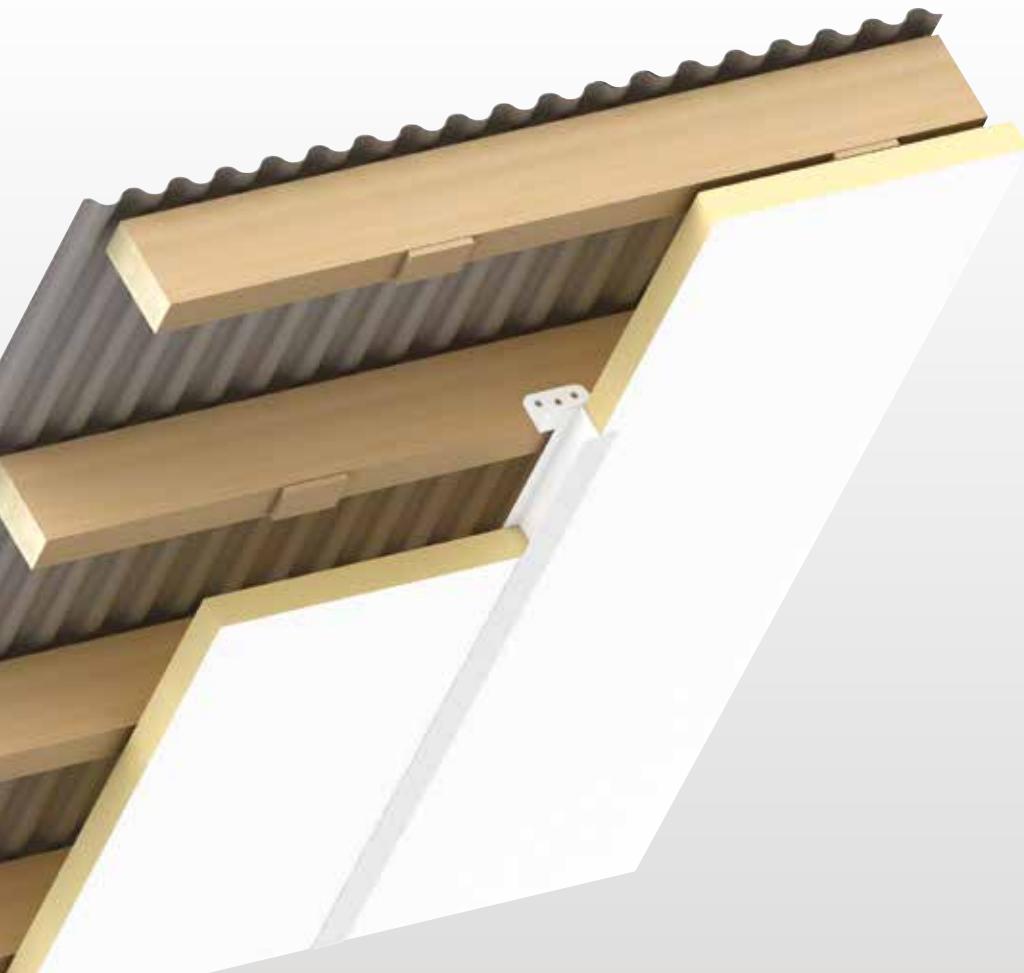




# Selthaan® Insulation for agricultural and industrial buildings

HIGH PERFORMANCE INSULATION FOR  
AGRICULTURAL BUILDINGS



- High performance rigid thermoset insulation – thermal conductivities as low as 0,023 W/m·K
- Smart and light appearance for attractive finishing
- Lightweight
- Rot and fungus proof
- Easy to install
- Available in custom lengths
- Easy to clean
- Chemically resistant against most alkalis, acids and salts

Fibre-free  
**Core**

  
**Kingspan**<sup>®</sup>

*Low Energy –  
Low Carbon Buildings*

# Introduction

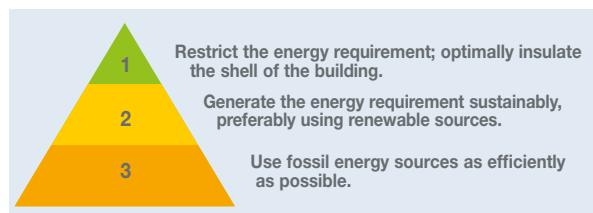
## Why insulate?

More than a third of all CO<sub>2</sub> emissions come from buildings. To reduce these emissions, the energy performance requirements for all building types are only becoming stricter. This change requires new or modified construction methods and/or more effective building materials.

### Trias energetica

According to the 'Trias Energetica' concept, proper insulation is the most effective method for reducing energy consumption in buildings and it forms the basis of the Energy Performance Standard (EPS). A well-insulated building can lead to a decrease in energy consumption of as much as two thirds.

The model on which 'Trias Energetica' is based was developed by Delft University of Technology. It separates structural engineering and electrical and mechanical measures in the first place to facilitate the calculation of the minimal energy requirement of a building and then subsequently to generate the energy requirement as efficiently as possible. The Trias Energetica process consists of three steps:



## High-quality insulation for agricultural buildings from Kingspan Insulation

In the construction of agricultural buildings, specific demands are imposed on the insulation of livestock accommodation, dairy rooms, storage and sorting areas, depots and other buildings and spaces. Achieving a constant temperature with maximum control of the indoor climate with minimal resources and effort is a fine art. In the storage of arable and horticultural products, preventing wastage caused by humidity, decay and disease is vitally important. For this purpose, *Kingspan*

**Selthaan®** insulating boards can be integrated in systems in which factors such as ventilation and the way in which a building is constructed play a role. Kingspan supplies various types of insulating board for the construction of agricultural buildings. Special matching auxiliary materials make Kingspan insulation board completely user-friendly.

## Services

### Calculations

Kingspan Insulation provides support from our Technical Service department, for specifiers, distributors and contractors. This includes a computerised system design to give fast, accurate technical advice. The department provides U-value calculations, condensation risk analysis and advice on product selection and insulation thickness for all types of applications.

### Detail drawings

The Kingspan Insulation Technical Service department can provide both general installation guidance and advice on detailed design and installation. For more information please contact our Technical Service department.

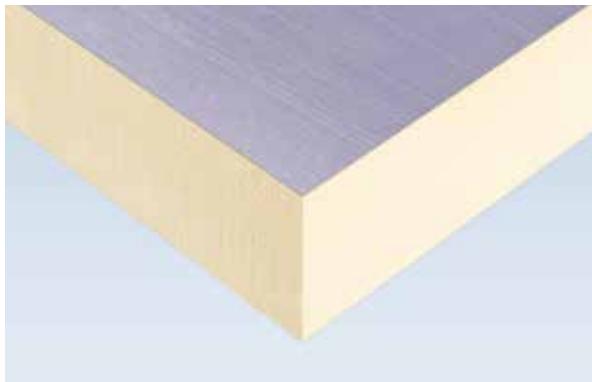
### Psi value calculator

A large amount of energy loss is caused by cold bridges in detail connections. The installation of high-quality insulation material reduces energy loss to a minimum. Kingspan Insulation has precisely calculated the  $\Psi$  value that can be achieved for most common detail connections.

You can contact our Technical Services department for passive house details, engineering advice, R<sub>C</sub> and U value calculations, condensation risk calculations, installation advice, etc.

Visit our website for more information:  
[www.kingspaninsulation.eu](http://www.kingspaninsulation.eu)

# Kingspan Selthaan® Alu



## Description

The **Kingspan Selthaan® Alu** insulation board has a rigid thermoset polyisocyanurate (PIR) fibre free insulation core, faced on both sides with PE coated aluminium craft foil.

## Application

This board is designed for the thermal insulation of agricultural and industrial buildings.

## Standard dimension

**Kingspan Selthaan® Alu** is available as standard with straight sides and the following dimensions: 3000 x 1200 mm (thickness 25 mm) and 5000 x 1200 mm (thickness 30 - 50 mm). On request boards are also available in lengths ranging from 1000 to 12000 mm and with rebate or saw cut.

For other dimensions and edge finishing, please contact our Customer Service department.

## Technical Data

| Property   | Value   |
|--|---|
| Euro Class<br>(EN 13501-1)                             | F (tested 'as placed on the market')                                  |
| Density  | min. 30 kg/m <sup>3</sup>   |
| Compressive strength at<br>10% compression<br>(EN 826) | ≥ 100 kPa   |
| Closed cells   | min. 90%  |
| Temperature resistance<br>PIR                          | Short duration: max. 200°C < 1 hour<br>Long duration: -50°C to +110°C |

## Thermal Properties

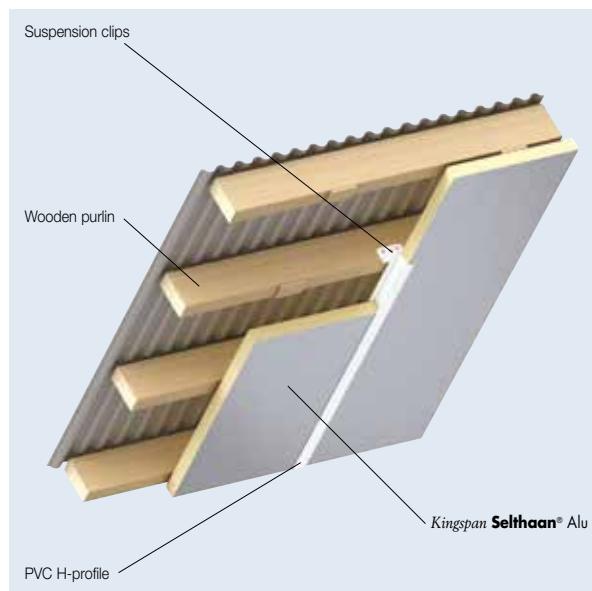
### Thermal Conductivity

| Isolation thickness<br>(mm) | $\lambda_D$ -value (W/m·K)<br>(EN 13165) |
|-----------------------------|--|
| < 80                        | 0,029                                    |
| ≥ 80                        | 0,028                                    |

### Thermal Resistance

| Isolation thickness<br>(mm) | R <sub>D</sub> -value<br>(m <sup>2</sup> ·K/W) |
|-----------------------------|--|
| 25                          | 0,85   |
| 30                          | 1,05   |
| 40                          | 1,40   |
| 50                          | 1,75   |
| 60                          | 2,10   |
| 80                          | 2,90   |
| 100                         | 3,60   |

### Example Detail

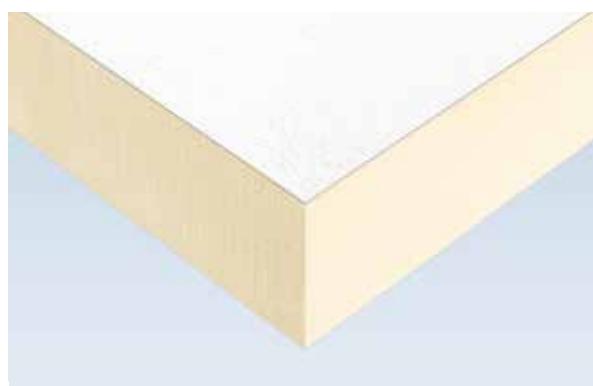


## Certification

All products in the **Kingspan Selthaan®** assortment are produced in accordance with the highest possible quality demands and have CE marking.

- CE marking

# Kingspan Selthaan® Megaplus



## Description

The **Kingspan Selthaan® Megaplus** insulation board has a rigid thermoset polyisocyanurate (PIR) fibre free insulation core, faced with a blanc stucco aluminium foil on one side and white stucco aluminium foil on the other side.

## Application

This board is designed for the thermal insulation of agricultural and industrial buildings.

## Standard dimension

**Kingspan Selthaan® Megaplus** is available as standard with straight sides, measuring 5000 x 1200 mm (thickness 30 - 50 mm). On request boards are also available in lengths ranging from 1000 to 6500 mm and with rebate or saw cut.

For other dimensions and edge finishing, please contact our Customer Service department.

## Technical Data

| Property   | Value   |
|--|---|
| Euro Class<br>(EN 13501-1)                             | D-s2, d0<br>(tested 'as placed on the market')                        |
| Density  | min. 30 kg/m³   |
| Compressive strength at<br>10% compression<br>(EN 826) | ≥ 150 kPa   |
| Closed cells   | min. 90%  |
| Temperature resistance<br>PIR                          | Short duration: max. 200°C < 1 hour<br>Long duration: -50°C to +110°C |

## Thermal Properties

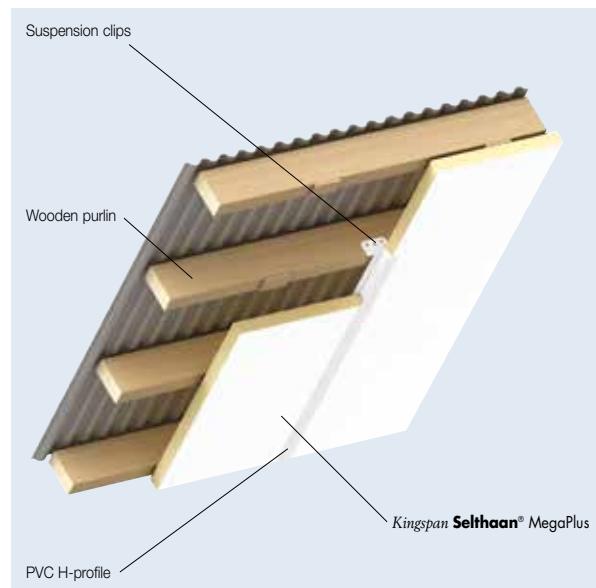
### Thermal Conductivity

| $\lambda_D$ -value (W/m·K)<br>(EN 13165) | 0,025 |
|--|-------|
|  |       |

### Thermal Resistance

| Isolation thickness<br>(mm) | $R_D$ -value<br>(m²·K/W) |
|-----------------------------|--------------------------|
| 30                          | 1,20                     |
| 40                          | 1,60                     |
| 50                          | 2,00                     |
| 60                          | 2,40                     |
| 70                          | 2,80                     |
| 80                          | 3,20                     |

### Example Detail



## Certification

All products in the **Kingspan Selthaan®** assortment are produced in accordance with the highest possible quality demands and have CE marking.

- CE marking

# Kingspan **Selthaan®** Megaplus B



## Description

The **Kingspan Selthaan®** Megaplus B insulation board has a rigid thermoset polyisocyanurate (PIR) fibre free insulation core, faced with a blanc stucco aluminium foil on one side and white stucco aluminium foil on the other side. The board has the unique European B fire safety classification.

## Application

This board is specifically designed for the thermal insulation of agricultural and industrial buildings, where a higher level of fire performance is required.

## Standard dimension

**Kingspan Selthaan®** Megaplus B is available as standard with straight sides. On request boards are also available in lengths ranging from 1000 to 6500 mm and with rebate or saw cut.

For other dimensions and edge finishing, please contact our Customer Service department.

## Technical Data

| Property   | Value   |
|--|---|
| Euro Class<br>(EN 13501-1)                             | B-s2, d0<br>(tested 'as placed on the market')                        |
| Density  | min. 30 kg/m <sup>3</sup>   |
| Compressive strength at<br>10% compression<br>(EN 826) | ≥ 150 kPa   |
| Closed cells   | min. 90%  |
| Temperature resistance<br>PIR                          | Short duration: max. 200°C < 1 hour<br>Long duration: -50°C to +110°C |

## Thermal Properties

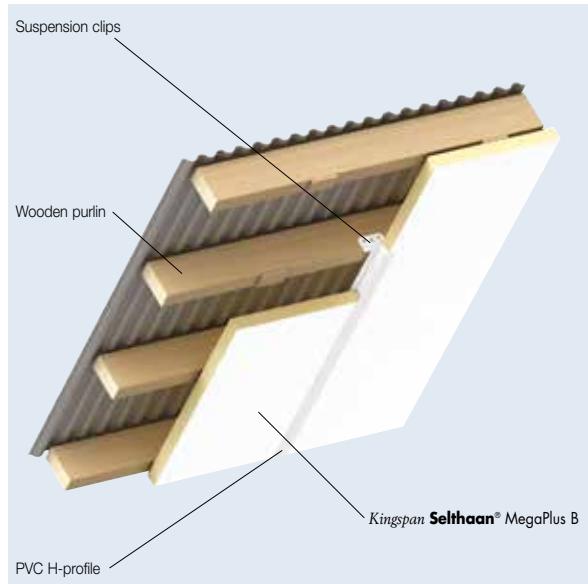
### Thermal Conductivity

$\lambda_D$ -waarde (W/m·K)  
(EN 13165)  
0,023

### Thermal Resistance

| Isolation thickness<br>(mm) | R <sub>D</sub> -value<br>(m <sup>2</sup> ·K/W) |
|-----------------------------|--|
| 30                          | 1,30   |
| 40                          | 1,70   |
| 50                          | 2,15   |
| 60                          | 2,60   |
| 80                          | 3,45   |

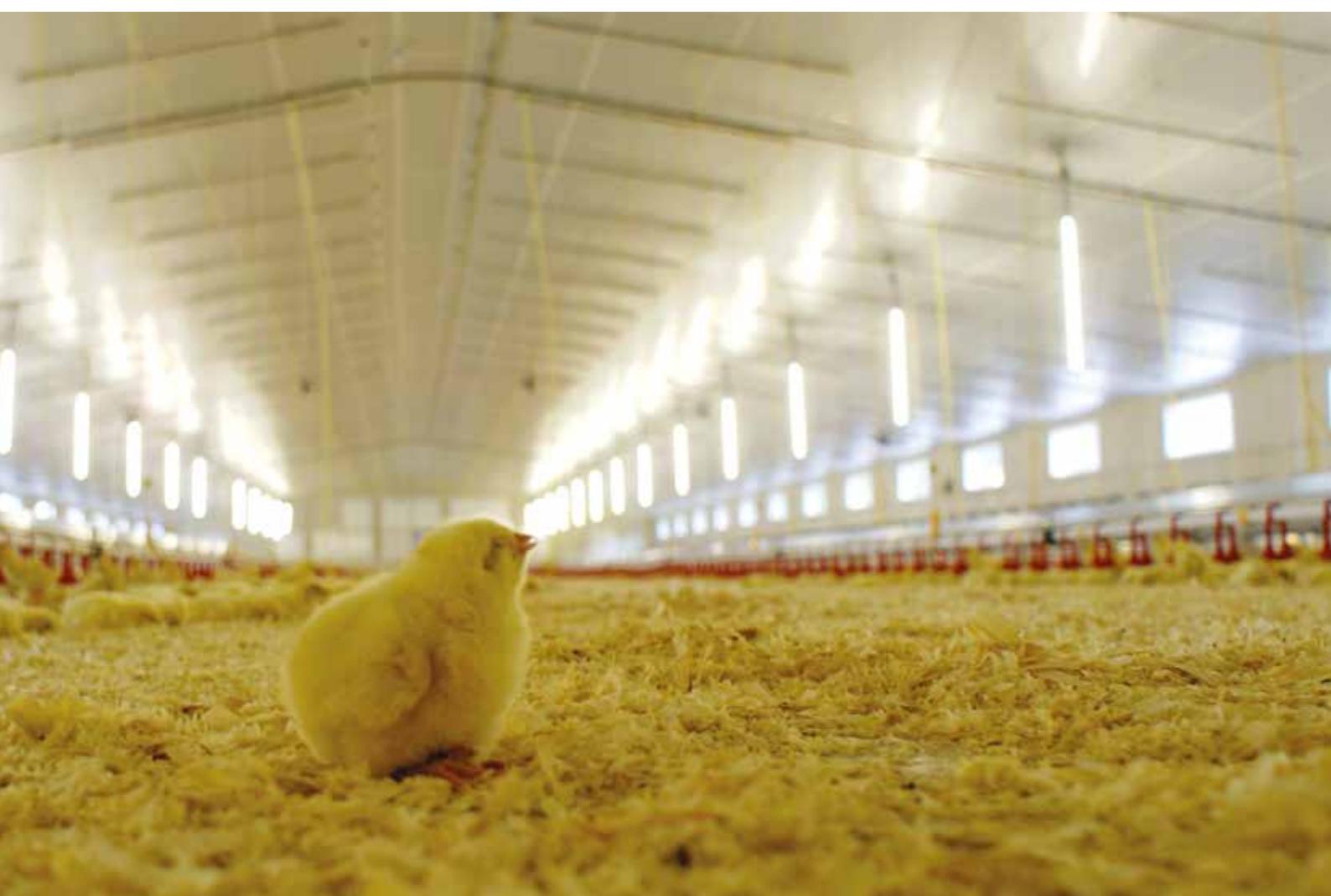
### Example Detail



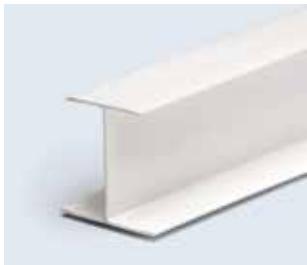
## Certification

All products in the **Kingspan Selthaan®** assortment are produced in accordance with the highest possible quality demands and have CE marking.

- CE marking



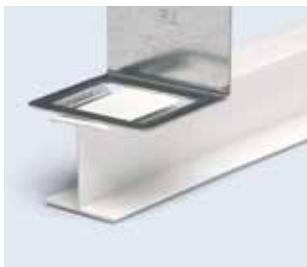
# Accessories



H-Profile white PVC



Aluminum nails



Suspension clips  
for H-profiles



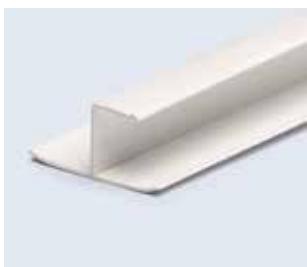
Plastic nail rosettes



U-profile white PVC



Eco agrar screws  
white



Chair profile white PVC



Screw bit



Screws and rosettes  
stainless steel



Linen-based aluminum  
tape grey



T-profile white PVC

# Contact Details

## Sales and Customer Service

For offers and orders please contact our sales department.  
You can also contact us for sample or literature requests.  
You can reach us from Monday to Friday: 08:00 - 16:30 hrs CET:

Local office Sweden  
Tel: +46 (0) 8 41 09 21 10  
email: info@kingspaninsulation.se

Local office Finland  
Tel: +46 (0) 8 41 09 21 10  
email: info@kingspaninsulation.fi

Local office Norway  
Tel: +46 (0) 8 41 09 21 10  
email: info@kingspaninsulation.no

Local office Denmark  
Tel: +45 44 95 55 59  
email: info@kingspaninsulation.dk

## Sales Office

Kingspan Insulation  
Universitetsparken 7  
4000 Roskilde  
Danmark

## Technical Service

Kingspan Insulation has one of the most technically advanced support services in the industry offering a full spectrum of advice, free of charge on both newbuild and refurbishment projects. The Kingspan Insulation technical team are continually updating their knowledge on building trends, construction methods and the development of building materials to ensure the advice and services provided are always one step ahead.

Services Available:

- R and U-value calculations.
- Advice on product selection and product data for the full range of Kingspan Insulation products.
- Installation and fixing advice on all applications and products.
- Specification and construction advice.
- Tapered Roofing Design service.

email: techline@kingspaninsulation.eu

The physical and chemical properties of the products of Kingspan Insulation B.V. represent average values, that have been obtained during generally accepted testing methods, submitted to normal product tolerances. Kingspan Insulation B.V. reserves the right to amend product specifications without prior notice. The information, technical details, fixing instructions etc. included in this literature are handed out in good faith and are consistent with the application targeted by Kingspan Insulation B.V. The images in this document are only meant to give a global impression of the looks of the product and show one out of many applications possible. Kingspan Insulation B.V. does not guarantee that the shown applications are in accordance with valid (local) regulations. Recommendations for use should be verified as to the suitability and compliance with actual requirements, specifications and any applicable laws and regulations. For other applications or conditions of use, Kingspan Insulation B.V. offers a Technical Advisory Service the advice of which should be sought for uses of Kingspan Insulation products that are not specifically described herein. Please check that your copy of the literature is current by contacting the Kingspan Insulation Marketing Department.



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