V1/0715/AI/TDO1



# **KORE Thermal Board**

# Dry Lining Insulation System Design Guide

# KORE Thermal Board Dry Lining System

#### **Key Features**

- Meets and exceeds building regulations
- Can be used in conjunction with other insulation systems to improve the structure's thermal performance
- Easy to work with and install
- Quick response heating experience in property
- Ideal for both new and existing buildings
- Vapour control layer provided by plasterboard

## **Application & Description**

#### Application

KORE Thermal Boards are used for the thermal insulation of solid or cavity masonry walls using plaster-dab/adhesive bonding or using mechanical fasteners. The boards may also be used to line ceilings and is a composite part of the KORE Lock system for insulating cold pitched roofs.

#### Description

KORE Thermal Board is a high performance dry lining insulation system consisting of rigid polystyrene (EPS) boards cut from moulded blocks of EPS bonded to 12.5mm plasterboard. Where standard plasterboard is bonded to the EPS, the vapour control layer is provided by the application of two layers of Gyproc Drywall Sealer. Alternatively, instead of standard plasterboard, Gypsum Duplex Board can be bonded to the EPS to act as the vapour control layer. The closed cell nature of the KORE EPS boards ensures a consistent thermal performance throughout the lifetime of the building. The product is suitable for use on existing buildings and for new buildings. KORE Thermal Board products are available in two grades of material, silver and white, and a range of thicknesses.

#### **Product Name**

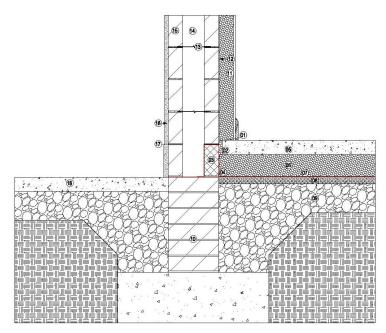
Product Name	Application	New Build	Retrofitting*
KORE Thermal Board EPS70 Silver	External Walls	Yes	Yes
KORE Thermal Board EPS70 White	External Walls	Yes	Yes



#### **Calculation Assumptions**

All U-value calculations are in accordance with BS EN ISO6946:2007. Unless stated otherwise inner blocks have a thermal conductivity of 1.13W/mK. Internal finish unless otherwise stated taken as 12.5mm standard plasterboard with 10mm plaster skim on dabs. Conventional surface resistance; direction of heat flow taken as horizontal. Where applicable, air layer is taken as unventilated. Unventilated air layer emissivity surfaces were given due consideration. The vapour control layer is provided by the plasterboard (Gyproc Duplex Board 12.5mm). The type of fixing used can affect the outcome of the thermal calculation. For these calculations the KORE Thermal Board was applied using plaster dabs, with two nailable plugs per board and is treated as an inhomogeneous layer. Corrections for air layers and mechanical fasteners penetrating the insulation layer were considered. Best practice in terms of workmanship was assumed and therefore the correction factor for air gaps where ignored in calculations for new buildings. A correction factor was applied to calculations for existing building. Mechanical fasteners for wall structure were taken as double triangle stainless steel, number 2.5 per m/sq. These calculations should act as a guide only. Please contact our technical team for a detailed U-value calculations and condensation risk analysis.

## Detail 1: Cavity Wall Block Construction - Block Inner and Outer Leaf, Empty Cavity, Thermal Plasterboard and Skim Internal Finish



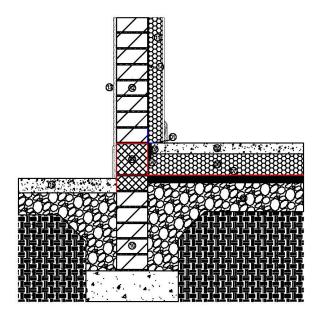
- Junctions to be taped with airtightness tape to ensure air tightness levels are achieved
- 2. 50mm KORE Floor Perimeter Insulation with min U-value of 0.75 m2k/w
- Autoclaved aerated concrete (AAC) block to be used to ensure thermal break is maintained. (maximum thermal conductivity of 0.20 W/mK). AAC block to be suitable for use in foundations in all conditions. Block to be installed so to avoid any effect of moisture on thermal conductivity
- 4. Radon membrane to be lapped over AAC block and sealed to radon barrier below with radon resisting sealing tape to avoid rising moisture

- 5. Concrete floor to engineers specifications and details
- 6. 150mm KORE Floor Insulation
- 7. Radon barrier on 50mm sand blinding and installed to TGD-C.
- 8. 50mm sand blinding
- 9. Compacted hardcore
- 10. Foundations and rising walls to Structural Engineers specifications and details
- 11. KORE Thermal Plasterboard with internal vapour control
- Continuous bonding adhesive seal along perimeter of KORE Thermal Plasterboard, to prevent air infiltration at back of plasterboard slab
- 13. Wall ties to manufacturers specifications and details
- 14. 150mm KORE Fill Bonded Bed Insulation to be installed
  225mm minimum below top of floor level
- 350mm cavity wall: -100mm concrete outer leaf, 150mm cavity and 100mm concrete block inner leaf
- 16. 24mm external sand cement render
- 17. DPC level minimum of 150mm from ground level
- 18. Footpath

#### U-Value Calculations: KORE Thermal Board EPS70 Silver (0.031W/mK)

	Plasterboard, Insulation, Block, Cavity, Block, Render
Thickness of Insulation bonded to Plaster- board (mm)	KORE Thermal Board EPS70
	U-value W/m²K
125	0.21
150	0.18
175	0.16

#### Detail 2: Solid Blockwork Wall - Solid Block Wall, Thermal Plasterboard and Skim Internal Finish, External Insulation Application



- 1. Junctions to be taped with airtight tape to ensure air tightness levels are achieved
- 50mm KORE Floor Perimeter Insulation with min U-value of 0.75 m2K/W
- 3. Autoclaved aerated concrete (AAC) block to be used to ensure thermal break is maintained (maximum thermal conductivity of 0.20W/mK). AAC block to be suitable for

use in foundations in all conditions. Block to be installed so to avoid any effect of moisture on thermal conductivity

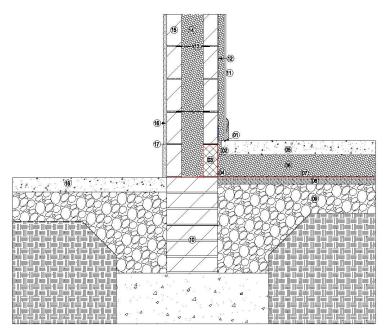
- Radon membrane to be lapped over AAC block and sealed to radon barrier below with radon resisting sealing tape to avoid rising moisture
- 5. Concrete floor to engineers specifications and details
- 6. 150mm KORE Floor Insulation
- 7. Radon barrier laid to manufacturers specifications and details
- 8. 50mm sand blinding
- 9. Compacted hardcore
- 10. Foundations and rising walls to Structural Engineers specifications and details
- 11. KORE Thermal Plasterboard with vapour control provided by Duplex plasterboard
- 12. 215mm solid concrete block wall
- 13. 24mm external sand and cement render
- Continuous bonding adhesive seal along perimeter of KORE Thermal Plasterboard to prevent air infiltration at back of plasterboard slab
- 15. Footpath

#### U-Value Calculations: KORE Thermal Board EPS70 Silver (0.031W/mK)

	Plasterboard, Insulation, Block, Cavity, Block, Render
Thickness of Insulation bonded to Plaster- board (mm)	KORE Thermal Board EPS70
	U-value W/m²K
130	0.21
150	0.18
175	0.16

## **Typical Construction & U-Value Calculations**

#### Detail 3: Cavity Wall Construction – Block Inner and Outer Leaf, Fulfil Cavity Insulation, Thermal Plasterboard and Skim Internal Finish



- Junctions to be taped with airtightness tape to ensure air tightness levels are achieved
- 2. 50mm KORE Floor Perimeter Insulation with min U-value of 0.75 m2k/w
- 3. Autoclaved aerated concrete (AAC) block to be used to ensure thermal break is maintained. (maximum thermal conductivity of 0.20 W/mK). AAC block to be suitable for use in foundations in all conditions. Block to be installed so to avoid any effect of moisture on thermal conductivity

- 4. Radon membrane to be lapped over AAC block and sealed to radon barrier below with radon resisting sealing tape to avoid rising moisture
- 5. Concrete floor to engineers specifications and details
- 6. 150mm KORE Floor Insulation
- 7. Radon barrier on 50mm sand blinding and installed to TGD-C.
- 8. 50mm sand blinding
- 9. Compacted hardcore
- 10. Foundations and rising walls to Structural Engineers specifications and details
- 11. KORE Thermal Plasterboard with internal vapour control
- Continuous bonding adhesive seal along perimeter of KORE Thermal Plasterboard, to prevent air infiltration at back of plasterboard slab
- 13. Wall ties to manufacturers specifications and details
- 14. 150mm KORE Fill Bonded Bed Insulation to be installed 225mm minimum below top of floor level
- 350mm cavity wall: -100mm concrete outer leaf, 150mm cavity and 100mm concrete block inner leaf
- 16. 24mm external sand cement render
- 17. DPC level minimum of 150mm from ground level
- 18. Footpath

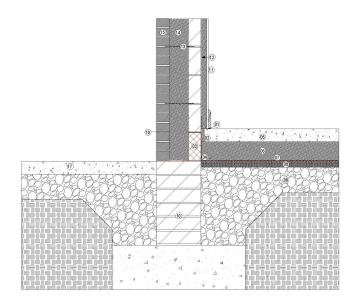
#### KORE Thermal Board EPS70 Silver (0.031W/mK) & KOREFill Bonded Bead (0.035W/mK)

	Plasterboard, Insulation, Block, Insulation, Block, Render	
KORE Fill Cavity Width (mm)	KORE Thermal Board EPS 70 Silver	U-value W/m²K
50	38	0.31
50	50	0.28
100	38	0.22
100	50	0.20
120	38	0.19
120	50	0.18
150	38	0.16
150	50	0.15
175	38	0.15
175	50	0.14
200	38	0.13
200	50	0.13

U-Value Calculations: KORE Thermal Board EPS70 White (0.037W/mK) & KOREFill Bonded Bead (0.035W/mK)

	Plasterboard, Insulation, Block, Insulation, Block, Render	
KORE Fill Cavity Width (mm)	KORE Thermal Board U-value W/ EPS 70 White	
50	38	0.33
50	50	0.30
100	38	0.22
100	50	0.21
120	38	0.20
120	50	0.19
150	38	0.17
150	50	0.16
175	38	0.15
175	50	0.14
200	38	0.14
200	50	0.13

#### Detail 4: Cavity Wall Construction – Block Inner and Brick Outer Leaf, Fulfil Cavity Insulation, Thermal Plasterboard and Skim Internal Finish



- Junctions to be taped with airtightness tape to ensure air tightness levels are achieved
- 50mm KORE Floor Perimeter insulation with min U-value of 0.75 m2k/w
- Autoclaved aerated concrete (AAC) block to be used to ensure thermal break is maintained (maximum thermal conductivity of 0.20W/mK). AAC block to be installed for use in foundations in all conditions. Block to be installed so to avoid any effect of moisture on thermal conductivity

- 4. Radon membrane to be lapped over AAC block and sealed to radon barrier below with radon resisting sealing tape to avoid rising moisture
- 5. Concrete floor to engineers specifications and details
- 6. 150mm KORE Floor Insulation
- 7. Radon barrier on 50mm sand blinding and installed to TGD-C
- 8. 50mm sand blinding
- 9. Compacted hardcore
- 10. Foundations and rising walls to Structural Engineers specifications and details
- 11. KORE Thermal Plasterboard with internal vapour control
- Continuous seals of bonding adhesive along perimeter of KORE Thermal Plasterboard to prevent air infiltration at back of plasterboard slab
- 13. Wall ties to manufacturers specifications and details
- 14. 150mm KORE Fill Bonded Bead insulation to be installed
  225mm minimum below top of floor level
- 352.5mm cavity wall: -102.5mm brick outer leaf, 150mm cavity and 100mm fair faced block inner leaf
- 16. DPC level minimum of 150mm from ground level
- 17. Footpath

U-Value Calculations: KORE Thermal Board EPS70 White (0.031W/mK) & KOREFill Bonded Bead (0.035W/mK)

	Plasterboard, Insulation, Block, Insulation, Brick	
KORE Fill Cavity Width (mm)	KORE Thermal Board EPS 70 Silver	U-value W/m²K
50	38	0.31
50	50	0.28
100	38	0.21
100	50	0.20
120	38	0.19
120	50	0.18
150	38	0.16
150	50	0.15
175	38	0.15
175	50	0.14
200	38	0.13
200	50	0.13

	Plasterboard, Insulation, Block, Insulation, Brick		
KORE Fill Cavity Width (mm)	KORE Thermal Board U-value W/m EPS 70 White		
50	38	0.33	
50	50	0.30	
100	38	0.22	
100	50	0.21	
120	38	0.20	
120	50	0.19	
150	38	0.17	
150	50	0.16	
175	38	0.15	
175	50	0.14	
200	38	0.14	
200	50	0.13	

#### **Thermal Bridging**

TGD Part L of the Irish Building Regulations states that care must be taken to ensure the continuity of insulation and to limit local thermal bridging and that any thermal bridge should not pose a risk of surface or interstitial condensation. KORE have undertaken a thermal bridging analysis of KORE Thermal Board Insulation at typical junctions. Please contact our team today to request a copy of these results.

## **Specification Guidelines**

#### **Building Standards**

KORE Thermal Board Insulation can satisfy the requirements of the Irish Building Regulations as outlined in:

- Part L Conservation of Fuel and Energy Dwellings (2011)
- Part L Conservation of Fuel and Energy Buildings other than Dwellings (2008)

#### Environmental

Expanded polystyrene is BRE Green Guide A+ Rated.

#### **Design Standards**

The following standards should be consulted regarding the construction of walls:

- BS 8212:1995 Code of practice for dry lining and partitioning using gypsum plasterboard
- BS 5250:2002 Code of practice for control of condensation in buildings

For retrofit installations consult:

• NSAI S.R. 54:2014 Code of practice for the energy efficient retrofit of dwellings

#### **General Design Data**

KORE Thermal Board may be used to insulate walls constructed of clay or calcium silicate bricks, concrete blocks, or natural and reconstituted stone blocks. It is essential that such walls are fully rain resistant have been designed and constructed to prevent moisture penetration, having due regard for the prevailing driving rain index. KORE Thermal Board has a gypsum plasterboard face and therefore is not suitable where the intention is to isolate dampness and should not be used in continuously damp or humid conditions. All mould and fungal growth should be treated prior to the application of the product.

With installations that form a void of 20mm or more between the insulation and the wall surface, services can be incorporated behind the KORE Thermal Board, making chasing of the wall unnecessary. When using adhesive systems or where the services have a greater depth than the void, the wall should be chased to accommodate the services. At no time should the insulation be chased as this will increase the thermal bridging factor at this point. Electrical cables should be installed in a conduit and the rules outlined in the National Rules for Electrical Install 4th Ed ET101: 2008. When bonding is by adhesives, it is essential that a satisfactory bond is achieved between the walling material and the adhesives. Backgrounds of high suction will behave differently to those of low suction.

#### **Behaviour in Fire**

The plasterboard used with KORE Thermal Board is deemed to be class 0 in accordance with the Building Regulations 1997 to 2013. Therefore, the KORE Thermal Board qualifies as the highest product performance classification as defined in Part B of the Technical Guidance Document (TGD), Fire Safety, Paragraph A10 of Annex A. It is necessary to isolate the EPS from possible sources of combustion by:

- Combustible material shall be separated by solid noncombustible material not less than 200mm thick, from a flue pipe to an oil, solid fuel, or gas heating appliance as outlined in section 2 of TGD Part J of the building regulations 1997 to 2013
- The KORE Thermal board should be separated by a minimum distance of 150mm from an oil, solid fuel or gas heating appliance as indicated in diagram 8 of TGD Part J 1997- 2013
- The KORE Thermal Board when installed with a purposely designed residual cavity between the board and the wall, will require the provision of cavity barriers and may be used in buildings of any purpose group provided
  - Cavity barriers in walls are provided at maximum distances apart or 10m unless a Class 1 materials is exposed to the cavity when a spacing of 20m may be adopted.
  - Every such cavity shall be closed by a cavity barrier around the whole perimeter of the wall or ceiling element and around the perimeter of any opening through such element, and
  - Cavity barriers in spaces between a roof and ceiling are provided at maximum distances apart of 20m for any class of surface exposed to the cavity
  - Where any wall or ceiling containing a cavity meets another such element, the cavities shall be closed so that they do not communicate with one another
  - Direction of the provision and spacing of cavity barriers is given in tables 3.2 and 2.2 of TGD Part B 1997 2013

#### **Condensation Risk**

The KORE Thermal Board has a water vapour diffusion resistance factor ( $\mu$ ) of 20 to 40 and is therefore unlikely to be affected by surface or interstitial condensation, provided all the joints between the boards are filled and taped in accordance with standard dry lining practice. It is important that correct use of heating and ventilation is maintained in the property. Interstitial condensation analysis for the average winter environmental conditions for cavity wall and hollow block walls indicate no condensation risk. When insulating buildings the recommendations of BS 5250: 2002 Code of Practice for control of condensation in Buildings, should be followed to minimise the risk of condensation within the building elements and structures.

#### Water Vapour Penetration

A vapour control layer is provided by the use of Gypsum Duplex Board or by applying 2 layers of Gyproc Drywall Sealer.

#### Wall Mounted Fixings

Any object fixed to the wall, other than light weight items, should be fixed through the lining board into the wall behind, using proprietary fixings. The recommendations of the manufacturer should be followed.

#### **Detailed Specification Guide**

Full specification guide is available on www.kore-system. com

## On Site

#### Planning

The KORE Thermal Board must be installed in accordance with good dry lining practice and all installations require careful planning and setting out.

- The ceiling lining should be in position before wall lining commences.
- Wall mounted fittings, such as electrical sockets, should be fitted so as to take account of the additional wall thickness. Heavier surface mounted fixings will require provision for the fixing load, which will be accommodated by the wall structure and not the KORE Thermal Board.
- For existing buildings the wall surface must be clean and free of loose or flaking materials. Wall paper must be stripped and the surface mounted fittings removed.

#### Installation Guidelines: Plaster Dab Bonding or Drywall Adhesive Bonding

Limitations: This installation method is not suitable for timber frame structures or where the external solid masonry wall structure is left unrendered (which will likely lead to moisture penetration). Suitability: This application type is suitable for use on masonry cavity walls or solid rendered masonry walls. The walls must be free from moisture penetration.

- Start by marking out on the floor and ceiling where the edge of each KORE Thermal Board should finish.
- Before applying the plaster or drywall adhesive ensure that the appropriate product specified for the application intended by seeking advice from the manufacturer of the product.
- Start by applying a continuous fillet of plaster or drywall adhesive around the outside perimeter of each wall and around the openings. This will act as both a fire stop and an airtight seal.
- Vertical dabs are then applied to wall background. It is essential to following the manufacturer's recommendations regarding the number, size and layout of the plaster or drywall adhesive.
- Next place the KORE Thermal Board against the dabs and tap the boards into position. The boards should be checked to ensure the surface is level. The guides previously marked out should be followed when placing the boards.
- Once the plaster or drywall adhesive has set two nailable plugs are fixed to each board, back to the plaster or drywall adhesive. These plugs should be positioned

## **On Site**

close to the edge of the KORE Thermal Board to ensure they will be easily covered during the taping and skimming procedure.

#### Installation Guidelines: Mechanical Fixing

Suitability: This application type is suitable for fixing to timber frame studs or battens fixed to masonry walls, metal framing systems or direct to masonry substrates.

Fixing to Timber Frame Studs or Battens

- Before starting installation the installer must ensure that the vertical timber frame studs or battens are set at a maximum 600mm centres, and timber frame studs or battens are positioned horizontally at floor and ceiling levels at a maximum of 1200mm vertical centres.
- In the case of batten it is important to ensure that they are backed by a damp proof course (DPC) strip, and that the timber used is treated softwood.
- Where the joints between the KORE Thermal Board do not finish at a timber stud or batten, timber noggins must be fitted to accommodate the joints. The joint of each KORE Thermal Board must lap the timber by a minimum of 19mm.
- The KORE Thermal Board should be mechanically fixed to the timber using either (1) dry wall screws at 300mm centres or (2) large headed galvanised clout nails at 150mm centres. Fixings should be located no less than 10mm from the edge of the KORE Thermal Board.
- Care should be taken to not overdrive nails or screws, they should be driven straight, with the heads embedded just below the surface of the plasterboard.

#### Fixing to Metal Frames

The instruction of the metal frame manufacture should be followed at all times. These installation notes act as a guideline only.

- Before starting installation the installer must ensure that the vertical metal frames are set at a maximum 600mm centres, and metal frames are positioned horizontally between the vertical pieces at skirting level, just below the ceiling to soffit level and at a maximum of 1200mm vertical centres.
- It will be necessary to use short lengths of metal frame as noggins to support board joints.
- The KORE Thermal Board should be mechanically fixed to the metal frame using either (1) dry wall screws at 300mm centres or (2) self-drilling and tapping, countersunk zinc coated screws at 150mm centres. Fixings should be located no less than 10mm from the edge of the KORE Thermal Board.

• Care should be taken to not overdrive nails or screws, they should be driven straight, with the heads embedded just below the surface of the plasterboard.

#### Fixing to Masonry Substrates

- Where the masonry structure is rendered or where there is a cavity present, then this installation method is suitable.
- Before starting, it is important to ensure that the wall surface is sound, dry and flat. Remedial works can be completed on the wall structure to provide a flat surface if necessary.
- The boards shall be fixed securely using mechanical fixings. The exact type of mechanical fixing required will vary, depending on the type of masonry substrate and the thickness of the KORE Thermal Board.
- The fixing should not overlap the board edges.

Details at the Corner, Skirting, Reveals and Soffits

- Corners: At internal and external corners the boards must be cut and rebated to allow the joint at an angle. Boards are lightly butted together to reduce air gaps.
- Skirting: A 5mm packer must be used at the base of the wall. This will provide a level surface to build up the boards. Once the boards are installed the packer should then be replaced with an acoustic sealant before the skirting is fitted.
- Reveals: The same fitting procedure is followed as outlined above. Thinner sheets of KORE Thermal Board are installed to accommodate the window and door frames.

#### Cutting

On-site trimming of boards where necessary to maintain continuity of insulation is easily executed using a fine tooth saw or builder's knife. Care must be taken to maintain the thickness, flatness and squareness of the board to achieve close butting of joints and continuity of insulation.

#### Packaging and Storage

KORE Thermal Boards must be protected from prolonged exposure to sunlight, and should be stored under cover in their original wrapping, not in contact with ground moisture and raised above ground level. Boards should be stored indoors. Care must be taken to avoid contact with solvents and with materials containing volatile organic components such as tar and newly treated timber.

#### **Properties**

#### Туре

KORE Thermal Board is supplied as EPS70 as defined in IS EN 13163:2012. Other densities and grades are available on request. Reaction to Fire Class E, containing a flame retardant additive.

#### Density

KORE Thermal Bo	oard EPS70 Silver:	15kg/m³
KORE Thermal Bo	pard EPS70 White:	15kg/m³

#### **Thermal Conductivity**

The thermal conductivity of KORE Thermal Board products are in accordance with IS EN 13163:2012 and EN 12667 Thermal Performance of building materials and products – determination of thermal resistance by means of guarded hot plate and heat flow meter method.

0.031W/mK

•	KORE Floor EPS70 White	0.037W/mK
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KORE Floor EPS70 Silver

#### **Thermal Resistance**

Thermal resistance, known as the R-value, varies with the thickness of the insulation. To calculate the thermal resistance ( $m^2$ .K/W) divide the thickness of the insulation by its thermal conductivity and round down the result to the nearest 0.05.

	KORE Thermal Board EPS70 Silver	KORE Thermal Board EPS70 White
Thickness Insulation (mm)	Thermal Resista	ance (m².K/W)
38	1.23	1.03
50	1.62	1.35
125	4.03	3.38
130	4.19	3.51
150	4.84	4.05
175	5.65	4.73

#### Durability

When installed as per the guidelines above the KORE Thermal Board will have a life equivalent to that expected for the life of the plasterboard facing. Under normal conditions of occupancy they are unlikely to suffer damage, but if damage does occur repairs can be easily carried out. The KORE EPS Insulation is rot-proof, water repellent and durable.

#### Behaviour in Fire

See details under Specification Guidelines above.

#### Dimensions

Standard size:	2.438m x 1.195m
	2.743m x 1.195m

Standard Thickness: KORE Thermal Board (all grades): Various thickness available. Plasterboard thickness: 12.5mm

#### Tolerances

Characteristic	Level/Class/ Limit Value	Value (mm)	Standard
Thickness	T2	±2mm	EN823
Length	L3	±3mm	EN822
Width	W3	±3mm	EN822
Squareness	<b>S</b> 5	±5mm	EN824
Flatness	P5 ≤0.72m² P15 >0.72m²	±5mm ±15mm	EN825

#### **Dimensional Stability**

KORE Thermal Board EPS70: In accordance with IS EN 13163: 2012 and EN1603, dimensional stability, DS(N)5, declared value  $\pm 0.5\%$ .

#### **Compressive Strength**

KORE Thermal Board EPS70: In accordance with IS EN 13163:2012 and EN826, compressive strength at 10% deformation, CS(10)70, declared value 82kPa.

#### **Bending Strength**

KORE Thermal Board EPS70: In accordance with IS EN 13163:2012 and EN12089, bending strength, BS115, declared value  $\geq$ 115.

#### **Tensile Strength**

KORE Thermal Board EPS70: In accordance with IS EN 13163:2012 and EN1607, tensile strength perpendicular to the surface, TR150, declared value  $\geq$ 150kPa.

#### Long Term Water Absorption by Total Immersion

KORE Thermal Board EPS70: In Accordance with IS EN 13163:2012 and EN12087, long term water absorption by partial immersion, declared value WL(P)i 0.2kg/m<sup>2</sup>.

## **Product Technical Details**

#### Long Term Water Absorption by Total Immersion

KORE Thermal Board EPS70: In Accordance with IS EN 13163:2012 and EN12087, long term water absorption by total immersion, declared value WL(T)i 5%.

#### Certification

NSAI Irish Agrement Certificate Number 06/0096.

#### Standards

KORE Thermal Board is manufactured to BS EN 13163 2012 under Quality System approved to EN ISO 9001: 2008 Quality Management.

## **Technical Services**

Contact our team today for:

- U-value calculations
- Condensation risk analysis
- Determination of exposure zone
- Accredited drawings and details
- Thermal bridging analysis results
- Temperature factor analysis

#### **Other Products**

KORE Loft Insulated Flooring System can be installed in conjunction with a wide range of KORE products and services. When installing KORE Loft Insulation, consider the following products for a whole-home solution:

- KORE Passive Slab Insulated Foundation System
- KORE Fill Bonded Bead Cavity Wall Insulation
- KORE Passive Roof Insulation
- KORE's Range of Draught Proofing Solutions
- KORE Wall and Roof Ventilation
- KORE Hot and Cold Water Lagging and Jackets
- KORE's Pipe Insulation

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