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Insulated Cladding Support System

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Sustainability & Health and Safety

Where power of natural stone meets comfort

Description



All Terrawool insulation boards have achieved a Euroclass rating of A1 for non-combustibility. Terrawool stone wool slabs are premium insulation boards composed of mineral wool, which is made up of thousands of fibres. Terrawool is made from volcanic basalt rock. Simplified recreation starts with reheated and melted volcanic rock within a large furnace up to 1,500°C (2,700°F). The liquid rock is channeled into a chamber where it's spun into fibrous strands. Balance density systems are highly engineered throughout design, accommodating slight imperfections on substructures, while allowing robust fixing. The breathable open-cell structure of Terrawool stone wool slabs allows water vapour to pass through, while factory-applied water repellent fibres on Rain Clad prevent water transmission through the insulation layer.

Terrawool insulation goes extra lengths to offer complete assurance against the threat of fire. With its ability to withstand temperatures of up to 1,000°C (1,800°F), the Terrawool insulation contains and prevents the spread of fire. At the same time, the stone wool will not produce any toxic smoke or emissions. Terrawool insulation is the superior choice for all construction needs, especially high-rise structures. In addition to fire resistance it offers high thermal insulation as well as optimum acoustic performance. The open porous structure of Terrawool insulation absorbs and reduces the impact of sound, while providing high thermal performance.



Advantages

- Non-combustible Euroclass A1 rating
- Suitable for buildings over 18 m
- High thermal and acoustic performance
- The breathable open-cell structure of Terrawool insulation boards allows water vapour to pass through
- Maximum versatility that allows you to create the façade you desire
- Factory-applied water-repellent fibres on Rainclad work to prevent water ingress during construction
- Specifically designed balance density of Terrawool insulation boards reduces the number of fixing
- Can easily be fitted around the brackets and provides a continuous thermal performance with the help of random fibre orientation
- Frameclad provide excellent sound insulation for your acoustic needs



Energy Saving



Fire Resistance



Acoustic Comfort



Sustainable Materials



Durability

Performance



Terrawool insulation products provide outstanding thermal protection, as well as many added benefits:



Acoustic performance

Terrawool insulation achieves optimum acoustic performance.



Fire

Terrawool slabs have been classified Euroclass A1 fire resistance to EN ISO - 13501-1.



Wind resistance

Terrawool has passed extensive wind loading fatigue tests.



Water resistance

Terrawool Rainclad and Wallclad is specifically designed for use in external insulation systems, due to its water-repelling agent content.



Condensation control

Terrawool insulation slabs are vapour-permeable. They allow moisture vapour to pass through the construction and reduce the risk of condensation.



Sustainable Materials

Terrawool slabs are natural and widely recyclable.



Durability

The properties and benefits of Terrawool insulation slabs will remain effective for the lifetime of the building.

Application Areas



Terrawool range of insulation boards are designed for use in all construction applications. Products in this section are specially manufactured for rainscreen cladding and non-ventilated cladding applications.

RAINCLAD

High performance A1 non-combustible thermal and acoustic insulation for rainscreen cladding applications.

With factory-applied water repelling agent, Rainclad also prevents water ingress during construction whilst exposed.

WALLCLAD

High performance high density A1 non-combustible thermal and acoustic insulation for non-ventilated cladding applications.

Wallclad is specially designed for non-ventilated cladding applications such as external render applications and solid brick slip applications.

DIMCLAD

High performance A1 non-combustible thermal and acoustic insulation with black tissue facing for all open-joint cladding systems and shadow gaps at any height. Eliminating the need to fix an additional layer that increases system weak points and additional labour costs.

Dimclad provides extra wind protection and UV stability for optimal efficiency on high-rise buildings.



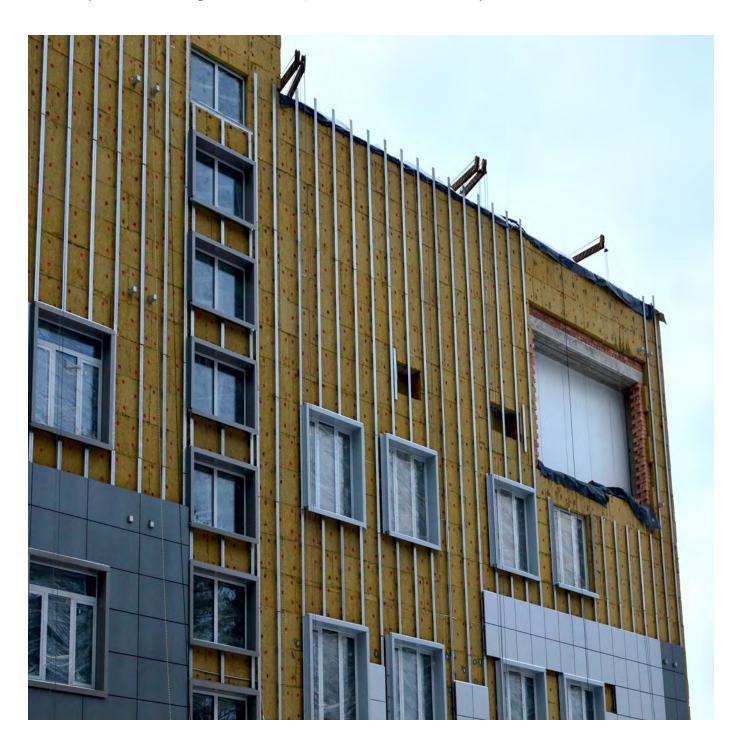


High Performance A1 non-combustible thermal and acoustic insulation for rainscreen cladding application

Rainclad is a non-combustible cladding insulation designed and developed by our highly experienced engineers for optimum performance in both ventilated, non-ventilated cladding systems and sealed systems such as curtain walling. Whatever your external wall insulation requirements are Rainclad is the answer.

With the factory-applied water repelling agent, Rainclad prevents the water ingress during construction. Rainclad is an A1 rated non-combustible product suitable for use on any type of building including the ones over 18m. It also gives a significant acoustic performance to your project. Rainclad insulation boards are made of stone wool fibres with special water repelling agent, which enhances the breathability of the walls and subsequently limits condensation.

The densitiy of Rainclad is 60 kg/m³ and it has a 0,035 W/mK thermal conductivity level.







Technical Information Table

TERRAWOOL INSULATION SLAB

			MAVV	OOLII	NSULF	MION.	SLAD				
Material Properties	Symbol	Unit			D	escripti	on			Tolarance	Standart
Material	-	-		Mineral Wool							EN 13162
Type Of Material	-	-			In	sulation	Slab			-	-
Density	ρ	Kg/m³				60				+/-%3	-
Width	b	mm				600				+/-%1,5	EN 822
Length	I	mm				1200				+/-%2	EN 822
Thickness	d	mm	30	50	60	80	90	100	120	тз	EN 823
	-		140	150	160	180	200	220	240	+/-%3 +/-%1,5 +/-%2 T3	
Thermal Resistance	RD	m²K/W	0,86 4,00	1,43 4,29	1,71 4,57	2,29 5,14	2,57 5,71	2,86 6,29	3,43 6,89	-	EN 12667/ 12939
Fire Class Reaction	-	-				A1				-	EN 13501-1
Square Deviation	Sb	mm/m		max 5						-	EN 824
Surface Smoothness	Smax	mm				max 6				-	EN 825
Dimensional Stability	ΔEd	%		max 1						-	EN 1604
Thermal Conductivity Valued Declared 10°C	λD	W/mK				0,035				-	EN 12667/ 12939
Covering	-	-				Uncoate	ed			-	-
Moisture Diffusion Resistance	μ	-				1				-	EN 12086: 2002
Vertical Faces Traction	δ m t	kPa		not required						-	EN 1607
Compressive Strength	δ10	kPa	not required						-	EN 826	
Dip Portion, Long-term Water Absorption	Wlp	Kg/m²	≤ 3						-	EN 12087	
Dip Portion, Short-term Water Absorption	Wp	Kg/m²				≤1				-	EN 1609
Material Packing	-	-				PE FILM	1			-	-

DIMCLAD

High-performance, A1 non-combustible thermal and acoustic insulation with black tissue facing for open-joint cladding systems and shadow gaps at any height.

Dimclad cladding insulation has been specifically engineered to promote fire safety and overall high performance. Along with being compatible with a number of different cladding attachment systems, Dimclad provides extra wind protection for optimal efficiency on high-rise buildings.

For open-joint cladding systems, Dimclad is the perfect solution due to it's black mineral fibre facing. This feature is engineered to deliver UV stability in the long termincreasing its thermal performance.

In the event of being directly exposed to fire, Dimclad's non-combustible features reduce the risk of emitting toxic gasses and spreading flames, therefore protecting the building. The factory-applied water repelling agent promotes Dimclad for use in construction during rainy weather, thus preventing water ingress and avoiding delays. Dimclads moisture resistance helps maintain an adequate insulating value for an extended period of time.

The density of Dimclad is 60 kg/m³ and it has a 0.039 W/mK thermal conductivity level.









Technical Information Table

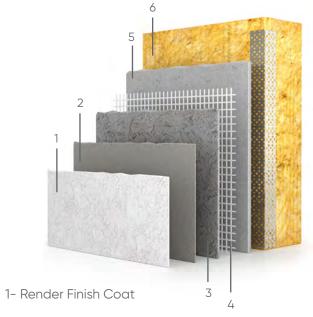
TERRAWOOL INSULATION SLAB Unit **Material Properties** Symbol Description **Tolarance** Standart Material Mineral Wool EN 13162 Type Of Material Insulation Slab Density ρ Kg/m^3 60 +/-%3 Width b 600 +/-%1,5 mm EN 822 1200 +/-%2 EN 822 Length I mm Thickness T3 EN 823 d mm 60 80 100 120 EN 12667/ Thermal Resistance RD m^2K/W 1,28 1,54 2,05 2,56 3,07 12939 Fire Class Reaction Α1 EN 13501-1 **Square Deviation** Sb mm/m max 5 EN 824 **Surface Smoothness** Smax max 6 EN 825 mm b3Δ % EN 1604 **Dimensional Stability** max 1 Thermal Conductivity EN 12667/ λD 0,039 W/mK Valued Declared 10°C 12939 Coated Covering Moisture Diffusion EN 12086: 1 μ Resistance 2002 **Vertical Faces Traction** δmt kPa not required EN 1607 **Compressive Strength** δ10 kPa not required EN 826 Dip Portion, Long-term Wlp EN 12087 ≤ 3 ${\rm Kg}/{\rm m}^{\rm 2}$ Water Absorption Dip Portion, Short-term EN 1609 Wp ≤ 1 Kg/m^2 Water Absorption **Material Packing** PE FILM

WALLCLAD

High performance, high density, non-combustible thermal and acoustic insulation with water-repellent.

Wallclad is specially designed for non-ventilated cladding systems such as exterior wall rendering and WALLCLAD Insulated bonded system to achieve an A1 Fire Rated cladding with high thermal and acoustic insulation.

Wallclad has been specifically engineered to promote flexibility on your designs. It is suitable to use on existing buildings, new built projects and re-cladding for non-combustible thermal and acoustic insulation purposes



- 2- Render Primer (Optional)
- 3- Render Base Coat
- 4- Reinforcement Mesh
- 5- Render Base Coat
- 6- Rainclad Plus 140 Stone Wool Insulation Board

Fire Resistance

Non-combustible/Euroclass A1 fire resistance

Water Resistance

Factory-applied water repelling agent prevents water ingress during construction

Condensation Control

Controls condensation due to the vapour permeable feature

Wind Resistance

Rainclad has passed extensive wind loading fatigue tests.

Insulation Properties

Provides excellent thermal and acoustic insulation performance



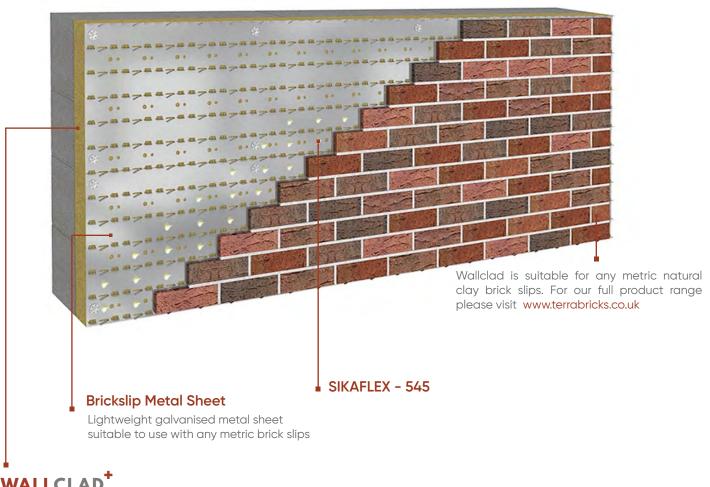
WALLCLAD Insulated Cladding Support System



WALLCLAD Insulated cladding support system is a unique stone wool brick cladding system that enables you to use real clay brick slips to create an insulated brick facade with A1 Fire Rating. It is an alternative solution for external brick cladding, which is easy to apply and has many advantages over similar systems on the market.

WALLCLAD Plus is stone wool based solid wall insulation which can be fitted to almost any type of substrate such as masonry block work, concrete, timber frame and steel frame. It is suitable for buildings up to 18m height and combines chemical and mechanical fixings for added streath and durability.

WALLCLAD is a user friendly system with less but durable components, thus enhancing thermal efficiency massively. It provides high protection of the building's structure by keeping your building warm and dry throughout the winter and summer.



WALLCLAD

High performance A1 Fire Rated, natural, non-combustible dense stone wool insulation

Non-combustible, A1 Fire Rated non-ventilated cladding system

Suitable for new builds, existing buildings and re-cladding

WALLCLAD can be used on substrates such as brickwork, dense/light block, timber frame and SFS

Terra tracking board is lightweight for easy installation and can be used with any metric brick slips.

Eliminates wet trades by using MS Polymer based adhesive

Thermal efficiency reduceces energy consumption and improves comfort

Full technical installation guide and training are available upon request.



Technical Information Table

TEDDAWOOL INSULATION SLAR

Material Properties	Symbol	Unit			Tolarance	Standart			
Material	-	-			-	EN 13162			
Type Of Material	-	-			Insulation	Slab		-	-
Density	ρ	Kg/m³			140			+/-%3	-
Width	b	mm			600			+/-%1,5	EN 822
Length	I	mm			1200			+/-%2	EN 822
Thickness	d	mm	50	60	70	80	100	Т3	EN 823
	-		110	120	130	140	150		
Covering	-	-			-	-			
Fire Class Reaction	-	-			-	EN 13501-1			
Square Deviation	Sb	mm/m			-	EN 824			
Surface Smoothness	Smax	mm			-	EN 825			
Dimensional Stability	ΔEd	%			-	EN 1604			
Thermal Conductivity Valued Declared 10°C	λD	W/mK			0,0364	,		-	EN 12667/ 12939
Thermal Resistance	RD	m²K/W	1,37	1,65	1,92	2,20	2,75		EN 12667/
memiai kesistance	KD.	m K/ VV	3,02	3,30	3,57	3,85	4,12		12939
Moisture Diffusion Resistance	μ	-			1			-	EN 12086: 2002
Vertical Faces Traction	δ mt	kPa			-	EN 1607			
Compressive Strength	δ10	kPa			-	EN 826			
Dip Portion, Long-term Water Absorption	Wlp	Kg/m²			-	EN 12087			
Dip Portion, Short-term Water Absorption	Wp	Kg/m²			-	EN 1609			
Material Packing	-	-			PE FILM			-	-

Thermal & Sound Insulation



Terrawool insulation boards achieve high acoustic performance due to their dense fibre orientation.

Stonewool is considered to be the most effective material for noise reduction from adjacent floors and other rooms within the same dwelling.

Terrawool sound insulation is used to build quiet, peaceful, and calming spaces in both residential and commercial environments. Because of its density, non-directional fibre alignment, and free porous structure, it catches and stops sound waves from flowing through. Terrawool insulation absorbs sound waves and removes vibration along with being non-combustible, and a temperature tolerance of up to 1,000°C.

FRAMECLAD

Terrawool Frameclad is specially designed for a variety of applications such as lofts, roofs and SFS systems and inner face of external walls. It consists of stone wool insulation boards which can be applied to all types of construction projects to achieve a high fire rate as well as thermal and acoustic performance.



FRAMECLAD

Terrawool Frameclad is specially designed for a variety of applications such as lofts, roofs, SFS systems and inner face of external walls.

It is made from stone wool, which gives a perfect fire rate as well as thermal and acoustic insulation. It is a non-combustible product and can be used in new build and refurbishment projects. It easy to apply and suitable for a variety of loft and roof insulations as well as inner face of the external walls. Terrawool Flexi Frame is available in a wide range of densities and thicknesses that gives a thermal resistance (RD) rate between 0.086 and 4.57 m 2 K/W.

Frameclad can be applied to any kind of frame structure such as timber frame and aluminium studs. It allows you to have a proper acoustic and thermal insulation.

The shrinking from the timber frames or aluminium studs will not effect installation therefore you can easily place the slabs in position and it will fit the space perfectly.

For optimum effectiveness Frameclad has a range of density options from 40 kg/m³ to 50 kg/m³ and thickness options from 30mm to 160mm.



FRAMECLAD



Technical Information Table

TERRAWOOL INSULATION SLAB

Material Properties	Symbol	Unit		Description						Tolarance	Standart		
Material	-	-		Mineral Wool						-	EN 13162		
Type of Material	-	-				Ins	ulatio	n Slab				-	-
Density	ρ	Kg/m³					40-8	0				+/-%3	-
Width	b	mm					600)				+/-%1,5	EN 822
Length	I	mm					1200	0				+/-%2	EN 822
Thickness	d	mm	30	40	50	60	80	100	120	140	160	ТЗ	EN 823
Density	ρ	Kg/m³	40	40	50	50	60	60	80	80	80	-	-
Thermal Resistance (Density 40–80)	RD	m²K/W	0,86	1,14	1,43	1,71	2,29	2,86	3,43	4	4,57	-	-
Fire Class Reaction	-	-					A1	<u>I</u>			J	-	EN 13501-1
Square Deviation	Sb	mm/m		max 5					-	EN 824			
Surface Smoothness	Smax	mm		max 6					-	EN 825			
Dimensional Stability	ΔEd	%		max 1					-	EN 1604			
Thermal Conductivity Valued Declared 10°C	λр	W/mK		0,035					-	EN 12667/ 12939			
Covering	-	-				Į	Jncoa	ted				-	-
Moisture Diffusion Resistance	μ	-					1					-	EN 12086: 2002
Vertical Faces Traction	δmt	kPa					/mi	n15				-	EN 1607
Compressive Strength	δ10	kPa				,	/mi	n15				-	EN 826
Dip Portion, Long-term Water Absorption	Wlp	Kg/m²					≤ 3					-	EN 12087
Dip Portion, Short-Term Water Absorption	Wp	Kg/m²					≤ 1					-	EN 1609
Material Packing	-	-					PE FII	LM				-	-

SOFFITCLAD

Terrawool Soffit Slab is manufactured using non-combustible stone wool insulation. Available with a plain, foil or tissue facing which can provide up to 4 hours fire protection to the underside of concrete soffits..



TERRAFLOOR

Suitable for use on all common floor applications. Terrafloor provide high compressive strength and has a tissue facing to be compatible with a wide range of installation methods. It consists of two product families, Thermal Terrafloor (150) and Acoustic Terrafloor (200).



SOFFITCLAD



Technical Information Table

		TE	RRAWOOL INSULATIO	ON SLAB			
Material Properties	Symbol	Unit	Desc	Tolarance	Standart		
Material	-	-	Miner	al Wool		-	EN 13162
Type Of Material	-	-	Insula	tion Slab		-	-
Density	ρ	Kg/m³	10	0		+/-%3	-
Width	b	mm	60	00		+/-%1,5	EN 822
Length	I	mm	12	00		+/-%2	EN 822
Thickness	d	mm	50	130	160	ТЗ	EN 823
Covering	-	-	Unc	oated		-	-
Fire Class Reaction	-	-	Į.	-	EN 13501-1		
Square Deviation	Sb	mm/m	mo	-	EN 824		
Surface Smoothness	Smax	mm	mo	-	EN 825		
Dimensional Stability	ΔEd	%	me	-	EN 1604		
Thermal Conductivity Valued Declared 10°C	λD	W/mK	0,0)364		-	EN 12667/ 12939
Thermal Resistance	RD	m²K/W	1,37	3,57	4,39	-	EN 12667/ 12939
Moisture Diffusion Resistance	μ	_		1		-	EN 12086: 2002
Vertical Faces Traction	δ m t	kPa	not re	-	EN 1607		
Compressive Strength	δ10	kPa	min 25	-	EN 826		
Dip Portion, Long-term Water Absorption	Wlp	Kg/m²	<u> </u>	-	EN 12087		
Dip Portion, Short-term Water Absorption	Wp	Kg/m²	<u> </u>	-	EN 1609		
Material Packing	-	-	PE	FILM		-	-

TERRAFLOOR 150

Technical Information Table

INSULATION SLAB FOR FLOOR APPLICATIONS Material Properties Symbol Unit Tolarance Standart Description Material Mineral Wool EN 13162 Type Of Material Insulation Slab 200 +/-%3 Density ρ Kg/m³ Width b 600 +/-%1,5 EN 822 mm 1200 +/-%2 EN 822 Length Ī mm Thickness d T3 EN 823 mm 50 Coated Covering Fire Class Reaction EN 13501-1 **Square Deviation** Sb $\,mm/m$ max 5 EN 824 **Surface Smoothness** Smax mm max 6 EN 825 **Dimensional Stability** b3Δ EN 1604 max 1 **Thermal Conductivity** EN 12667/ λÞ W/mK 0,0364 Valued Declared 10°C 12939

1,37

1

min 15

min 55

≤ 3

≤ 1

PE FILM

EN 12667/

12939

EN 12086:

2002

EN 1607

EN 826

EN 12087

EN 1609

Thermal Resistance

Moisture Diffusion

Vertical Faces Traction

Compressive Strength

Dip Portion, Long-term

Dip Portion, Short-term

Water Absorption

Water Absorption

Material Packing

Resistance

RD

μ

 δmt

δ10

Wlp

Wp

 m^2K/W

kPa

kPa

 ${\rm Kg}/{\rm m}^2$

 Kg/m^2

TERRAFLOOR 200



Technical Information Table

TERRAWOOL INSULATION SLAB									
Material Properties	Symbol	Unit	Description	Tolarance	Standart				
Material	-	-	Mineral Wool	-	EN 13162				
Type Of Material	-	-	Insulation Slab	-	-				
Density	ρ	Kg/m³	200	+/-%3	-				
Width	b	mm	600	+/-%1,5	EN 822				
Length	1	mm	1200	+/-%2	EN 822				
Thickness	d	mm	50	ТЗ	EN 823				
Covering	-	-	Coated	-	-				
Fire Class Reaction	-	-	A1	-	EN 13501-1				
Square Deviation	Sb	mm/m	max 5	-	EN 824				
Surface Smoothness	Smax	mm	max 6	-	EN 825				
Dimensional Stability	ΔEd	%	max 1	-	EN 1604				
Thermal Conductivity Valued Declared 10°C	λD	W/mK	0,0038	-	EN 12667/ 12939				
Thermal Resistance	RD	m²K/W	1,32	-	EN 12667/ 12939				
Moisture Diffusion Resistance	μ	_	1	-	EN 12086: 2002				
Vertical Faces Traction	δmt	kPa	min 18	-	EN 1607				
Compressive Strength	δ10	kPa		-	EN 826				
Dip Portion, Long-term Water Absorption	Wlp	Kg/m²	≤ 3	-	EN 12087				
Dip Portion, Short-term Water Absorption	Wp	Kg/m²	≤ 1	-	EN 1609				
Material Packing	_	_	PE FILM	-	-				

Work on site

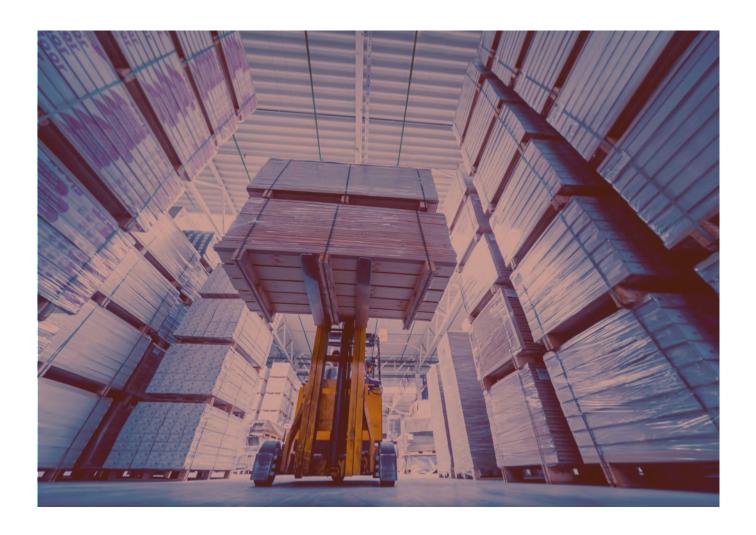
Terrawool insulation slabs are light and easy to cut to any shape with a sharp knife. Slabs are supplied in waterproof packaging on pallets that are shrink wrapped for outside storage.

Once installed, the slabs can be left unprotected for an extended period of time, prior to fixing your chosen exterior facade.

Reminders on Loading, Offloading, Transport and Storage

- All work should be carried out in dry weather
- The slabs should be covered even for short distances
- The slabs should be stored in the original packaging and should not be used if the packaging is damaged
- The slabs should not be stepped on
- The textured side of the slabs should be facing outward
- Slab packs should never be pulled on the ground
- Slabs should only be carried by minimum of 2 people
- Slabs should be stored on a flat and non-slip surface





Sustainability



Terrawool stands by sustainable production by using natures existing resources efficiently. Being made of natural material, Terrawool promotes protecting the environment by saving energy. With the use of stone wall the energy is used effectively and the carbon emissions are reduced. Terrawool continues to develop and innovate products that improves the efficient use of natural resources.

Terrawool is always motivated to be one step ahead in protecting the environment by using more efficiently, what nature has given us.



Environment

Being made of natural raw materials, Terrawool is an environmentally friendly product. Our slabs are ecological and don't allow growth of bacteria and other microorganisms. Terrawool reduces the fuel costs and energy in use, provides sound insulation and fire resistance.

Terrawool slabs are widely recyclable. Due to its dimensional stability, it is not affected by temperature changes that may occur during the year.

Health and Safety

Terrawool Rain Clad stone wool is not classified carcinogenic according to current UK and Republic of Ireland health and safety regulations and EU Directive 97/69/EEC and EC.

To guide the preparation of the risk assessments, as required by the Control of Substances Hazardous to Health Regulations (COSHH), a Material Safety Data Sheet can be downloaded from terrawool.co.uk.

DISCLAIMER

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TERRAWOOL

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