

KNAUF INSULATION

High performance insulation solutions for H1 compliance

RESIDENTIAL



Superior thermal
performance



Excellent acoustic
performance



Saves energy and
lowers energy bills



Soft to touch, easy to
handle, cut & install

Build on us.



Knauf Insulation is made using **advanced technology** for optimum performance:



ECOSE® Technology

A unique plant-based binder which contains no added formaldehyde or phenol. It is made from natural raw materials that are rapidly renewable, is 70% less energy intensive to manufacture than traditional binders, and makes our insulation soft to touch and easy to handle.



DriTherm® Technology

A silicone treatment that is added during manufacture to upgrade the moisture resistance of the glasswool insulation.



TwinTech® Technology

An advancement in insulation manufacture - the dual forming technique enables thicker products for evolving building code requirements and ensures there is a smooth finish on both sides of the insulation for optimal product handling and appearance.

Knauf Insulation glasswool:

- » Is made using up to 80% recycled glass
- » Is packaged using compression packing technology
- » Has been certified DECLARE 'Red List Free' indicating our products are free from chemicals and elements known to pose serious risks to human health.



ENERGY EFFICIENCY (H1) REQUIREMENTS

The Ministry of Business, Innovation and Employment (MBIE) has updated the H1 Energy Efficiency requirements for new homes and commercial buildings.

The purpose is to increase energy efficiency and reduce demand in new buildings by up to 40%, making buildings warmer, drier & healthier, with less impact on the environment.

ENERGY EFFICIENCY FOR ALL HOUSING AND SMALL BUILDINGS (UNDER 300m²)

The changes impact the design and specification of roof, wall and floor insulation. Glazing including windows, doors and skylights are also impacted.

H1/AS1 of the Building Code provides 3 methods for compliance:

1. **The Schedule Method** – Meet or exceed the minimum R-Values provided in Table 1.
2. **The Calculation Method** – Design a building which has an equivalent or lower total heat loss parameter than that of a reference building where the heat loss for the reference building is calculated using the elemental R-Values shown in Table 1.
3. **The Modelling/Verification Method** – A calculation of the energy demand for the whole building using whole building calculation software.

A NEW QUICK AND EASY SINGLE LAYER CEILING SOLUTION

Designed for
H1 Compliance

R7.0 CEILING INSULATION

H1 compliance doesn't need to be difficult. Installing a double layer ceiling system can be time consuming, costly and complex. In fact double layer systems can **take up to twice as long** to install*.

That's why we have developed an advanced single layer solution to meet H1 compliance standards for new houses.

*Comparing single layer R7.0 330mm to double layer (110mm base + 180mm top layer) cross hatched for thermal bridging compliance.

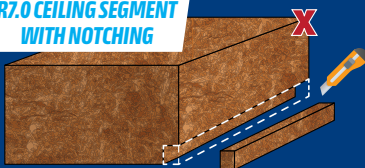


NO NOTCHING REQUIRED

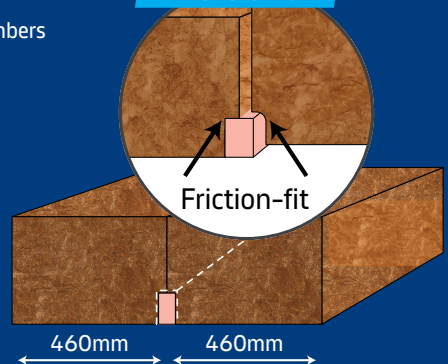
The new Knauf Insulation R7.0 single layer ceiling segment is designed to expand around the timber frame and knit to the adjacent segment, creating a continuous layer of insulation in the ceiling. The best part is there is no notching or cutting of the segment required!

- › Significant savings in labour (no notching)
- › Increased thermal performance above and around the timbers
- › Less complexity to demonstrate compliance
- › Less material wastage
- › More coverage per pack resulting in less on-site handling
- › Reduced overall project cost.

R7.0 CEILING SEGMENT WITH NOTCHING



R7.0 CEILING SEGMENT - NO NOTCHING



For more information please visit www.knauf.com



CEILINGS



Knauf Insulation ceiling segments are designed for use in cold roof applications where pitched roofs are insulated at ceiling level.

Knauf Insulation glasswool ceiling insulation solutions play a major role in providing thermal, fire safety, acoustic performance and comfort with the built environment. Exceeding the minimum R-Value in ceilings can pay dividends elsewhere.



CodeMark
CMNZ30095



Declare.

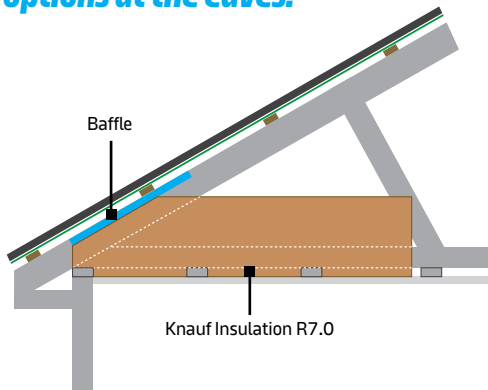


TWINTeCH



R-Value (m ² K/W)	Code	Thickness (mm)	Width (mm)	Length (mm)	Pieces per pack	Area per pack (m ²)
R3.4	INKISR860146	110	580	1160	7	4.7
R3.6	INKICE860144	170	430	1160	18	9.0
R4.2	INKICE860138	210	430	1160	14	7.5
R5.2	INKICE860132	230	430	1160	11	5.5
R7.0	INKICE860128	330	460	1160	8	4.3

Insulation installation options at the eaves:

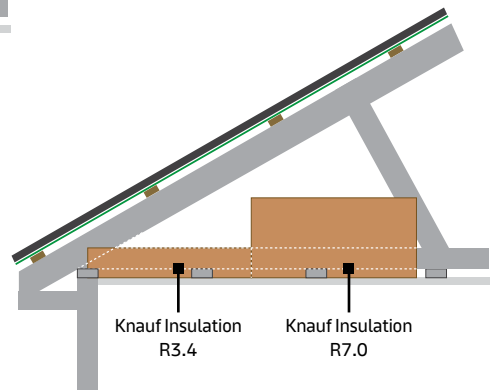


< OPTION A

R7.0 single layer system compressed at the eaves.

OPTION B >

R7.0 single layer with R3.4 perimeter batt at the eaves.





SKILLION ROOFS



Knauf Insulation skillion batts are designed for use in warm skillion roofs where the roof is insulated at rafter level, offering a combination of excellent thermal and acoustic performance.

Knauf Insulation skillion roof insulation products provide the thermal values required while acknowledging ventilation and best practice methods of construction.



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Declare.



TWINTeCH

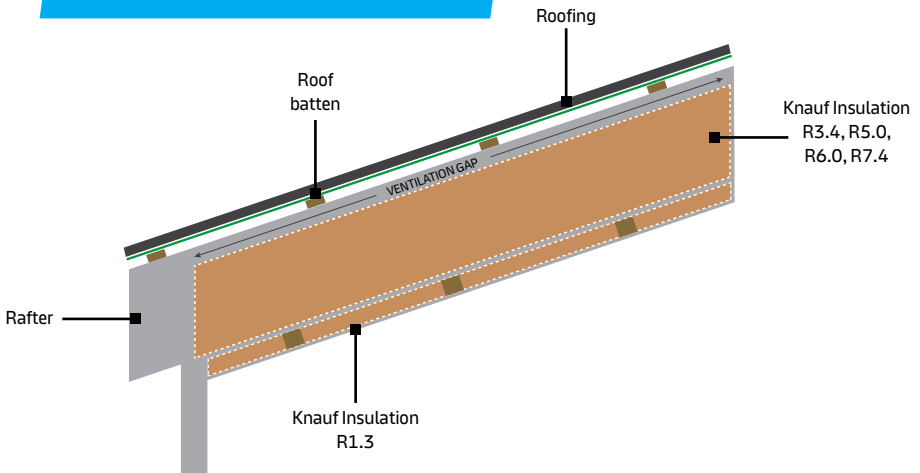


R-Value (m ² K/W)	Code	Thickness (mm)	Rafter depth (mm)	Width (mm)	Length (mm)	Pieces per pack	Area per pack (m ²)
R1.3	INKIWA860164	45	*	450	1160	24	12.5
R3.4	INKISR860146	110	140	580	1160	7	4.7
R5.0	INKISR860134	165	190	430	1160	6	3.0
R6.0	INKISR860130	215	240	430	1160	6	3.0
R7.4	INKISR860126	265	290	430	1160	6	3.0

*Designed for use as a secondary insulating layer installed between battens beneath rafters.

IN DETAIL

Skillion roof detail with optional additional insulation layer beneath rafters.





WALLS

Knauf Insulation wall batts are designed for use in timber frame applications between studwork, offering a range of thermal performance to meet evolving construction requirements.

Knauf Insulation has a full range of R-Values up to R2.8 in a 90mm cavity and R4.4 in a 140mm cavity. The R1.3 45mm secondary layer provides flexibility for increased performance.



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Declare.



with **ECOSE**



EXTERNAL

R-Value (m ² K/W)	Code	Thickness (mm)	Width (mm)	Length (mm)	Pieces per pack	Area per pack (m ²)
R1.3*	INKIWA860164	45	450	1160	24	12.5
R2.2	INKIWA860162	90	580	1160	29	19.5
R2.4	INKIWA860160	90	580	1160	20	13.5
R2.6	INKIWA860158	90	430	1160	12	6.0
R2.6	INKIWA860156	90	580	1160	12	8.1
R2.8	INKIWA860152	90	430	1160	10	5.0
R2.8	INKIWA860150	90	580	1160	10	6.7
R3.2	INKIWA860148	140	580	1160	22	14.8
R4.1	INKIWA860140	140	580	1160	9	6.1
R4.4	INKIWA860136	140	580	1160	6	4.0


*Designed for use as a secondary insulating layer installed between battens to the inside of studwork.







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