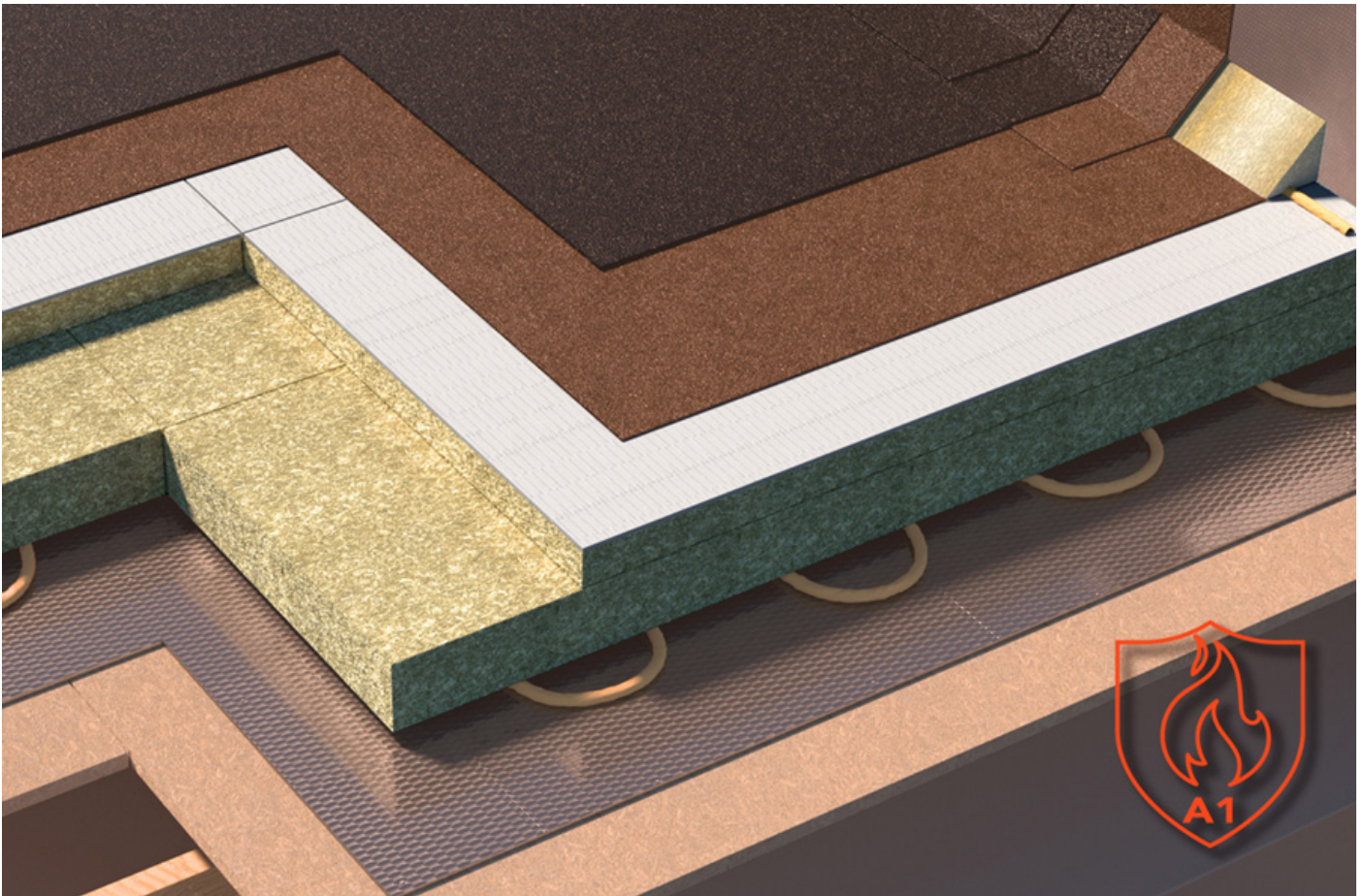


HARDROCK® Multi-Fix (DD)



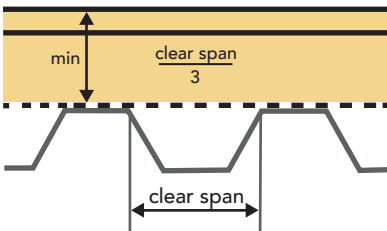
HARDROCK® Multi-Fix (DD)

General Information

HARDROCK® Multi-Fix (DD) insulations boards are manufactured from volcanic rock, producing a non-combustible Dual Density Mineral Wool insulation board that provided unique fire and acoustic performance. Suitable for use with other waterproofing systems.

HARDROCK® Multi-Fix (DD) is available in uniform or tapered variants. Achieves LPC LPS1181: Part 1 EXT A rating, complies with Zurich School and Academy Design guide and HTM05-03 guidance for healthcare.

DECLARED PERFORMANCE

Thermal conductivity	λ_D value = 0.039 W/mK
Typical weight	150mm thick board = 28.8kg
Density	160 kg/m ³ (typical)
Water vapour resistance	Typical water vapour resistance = 5.9MNs/g
Spanning metal decks	 <ul style="list-style-type: none"> The minimum board thickness is equal to the maximum trough width divided by 3. The maximum trough width is 300mm Long edges should be at right angles to the corrugations, all board joints should be fully supported by the deck.

HARDROCK® MULTIFIX(DD) CHARACTERISTICS

Thickness (mm)	Length (mm)	Width (mm)	R Value (m ² k/W)	Typical U value on Metal deck (W/m ² k)	Typical U value on Concrete deck (W/m ² k)	Typical U value on Timber deck (W/m ² k)
60	1200	1000	1.54	0.59	0.57	0.55
85	1200	1000	2.18	0.43	0.42	0.41
105	1200	1000	2.69	0.35	0.34	0.34
115	1200	1000	2.95	0.32	0.32	0.31
150	1200	1000	3.85	0.25	0.25	0.24
170	1200	1000	4.36	0.22	0.22	0.22
185	1200	1000	4.74	0.20	0.20	0.20
210 (150+60)	1200	1000	5.38	0.18	0.18	0.18
235 (150+85)	1200	1000	6.03	0.16	0.16	0.16
255 (150+105)	1200	1000	6.54	0.15	0.15	0.15

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Acoustic Performance

The inherent acoustic properties of HARDROCK® Multi-Fix (DD) can reduce or even eliminate the need for additional acoustic mass layers when meeting all but the most demanding specifications for the reduction of airborne and rain noise. For very high levels of acoustic treatment, performance can be enhanced with the addition of a ROCKFON ceiling or a layer of ROCKWOOL Acoustic Membrane.

ACOUSTIC PERFORMANCE		
Base layer	Upper Layer	Weighted Reduction (dB)
150mm		41*
170mm		44*
185mm		45*
150mm (Underlay)	60mm	46*
150mm (Underlay)	85mm	47*
150mm (Underlay)	105mm	48*
150mm (Underlay)	115mm	48*

Fire Performance

As well as achieving a European 'reaction to fire' classification of A1, HARDROCK® Multi-Fix (DD) offers a high level of fire protection and is classified as non-combustible in accordance with UK Building Regulations and the LPCB.

Total Thickness	Fire Resistance	
	Integrity (mins)	Insulation (mins)
105mm-120mm (underlay)	60**	41*
150mm-185mm	90**	44*
210mm	120**	120**

Notes

Acoustic, Fire and Thermal Performances are based on a construction of Metal Deck, VCL, thickness of HARDROCK® (DD) and Single Ply Membrane. No ceilings are taken into account within the constructions.

Acoustic Performance

* Prediction data based on a selection of ROCKWOOL test data.

Fire Performance

** All fire rated systems must comprise of two insulation layers with staggered joints to create the total thickness shown in the table.

HARDROCK® Multi-Fix (DD)

Health & Safety

Chemically inert and safe to use; see Safety Data Sheet for further information.

Storage

Packs of HARDROCK® Multi-Fix (DD) should be completely covered with weatherproof sheeting, and stored in a flat, dry area off the ground away from possible mechanical damage and sources of ignition. Keep dry at all times and not exposed to rain. Protect from prolonged exposure to sunlight and should be stored either under cover or covered with opaque polyethylene sheets.

Handling

Packs of HARDROCK® Multi-Fix (DD) should be completely covered with weatherproof sheeting, and stored in a flat, dry area off the ground away from possible mechanical damage and sources of ignition. Keep dry at all times and not exposed to rain. Protect from prolonged exposure to sunlight and should be stored either under cover or covered with opaque polyethylene sheets.

- Do not drop boards
- To cut use a fine tooth saw
- Wear eye protection
- Damaged boards should not be used

Ensure accurate trimming to achieve close butt joints and continuity of insulation, particularly around projections through the roof.

Cutting with power tools generates dust and should be kept to a minimum. If the use of power tools is necessary it should be carried out in well ventilated conditions and a dust mask selected in accordance with BS EN 149 should be worn.

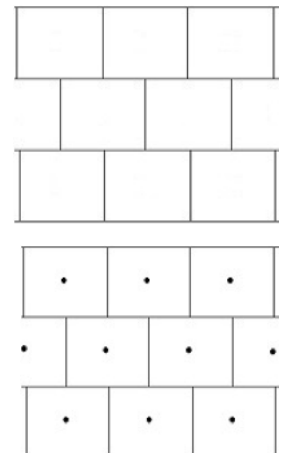
Laying pattern:

Bonded

- Lay with fleece top layer up. Bond to the vapour control layer control layer with a suitable adhesive in accordance with the specification.
- Butt joint edges in a break bonded, staggered pattern laid at right angles to the edges of the roof or diagonally across the roof.
- Wear eye protection.

Mechanically Fixed

- HARDROCK® Multi-Fix (DD) should be mechanically fastened to the structural deck using ProFast tube washers and mechanical fasteners in accordance with the Quantum Insulation specification.
- Attach using one fastener centrally per board.
- Butt joint edges in a break bonded, staggered pattern laid at right angles to the edges of the roof or diagonally across the roof.



Installation Instructions

- Torch apply with minimum heat at all times onto the facing.
- Never apply the flame to the insulation facing.
- Consider using flame/edge guards when torching.
- In the event of any doubt, please contact Quantum Insulation Ltd.

This information given in good faith and is based on the latest knowledge available to Quantum Insulation Ltd. Whilst every effort has been made to ensure that the contents of the publication are current while going to press, customers are advised that products, techniques and codes of practice are under constant review and liable to change without notice.

For further information on Quantum Insulation products and services please call 01858 456018 or email sales@quantuminsulation.com

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