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## EarthWool® Sound Control Batts

### Description

Knauf Insulation's EarthWool® Sound Control Batts are made from highly resilient, inorganic glass fibres bonded by ECOSE® Technology, a revolutionary new binder based on rapidly renewable bio-based materials rather than non-renewable petroleum based chemicals. ECOSE® Technology reduces Knauf Insulation binder embodied energy and contains no added phenol, formaldehyde, acrylics or artificial colours found in traditional glasswool insulation.

### Application

EarthWool® Sound Control Batts provide a cost-effective thermal and acoustical barrier for energy-efficient construction. The batts' consistent quality, low dust and clean-cutting resilient fibres make fabrication easy and installation fast.

### Light Commercial Applications

EarthWool® Sound Control Batts are available in a range of thicknesses. EarthWool® Sound Control Batts can improve  $R_w$  ratings in wood stud construction by 3 to 5 points and in metal stud construction by 8 to 10 points, depending on the complexity of the wall configuration and the thickness/density EarthWool® Sound Control Batts can be used for exterior and interior walls, floors, crawlspaces and a variety of ceiling applications.

### Performance

#### Thermal Conductivity

ASTM C 518 and AS/NZS 4859.1: 2002

#### Thermal Resistance

ASTM C 653 and AS/NZS 4859.1: 2002

### Technical Data

#### Water Vapor Absorption (ASTM C 1104)

- Less than 5% by weight.

#### Corrosion Resistance (ASTM C 665)

- No greater than sterile cotton.

#### Microbial Growth (ASTM C 1338)

- Does not support microbial growth.

#### Fire Resistance (ASTM E 136)

- Non-combustible.

### Specification Compliance

AS/NZS 4859.1: 2002 Materials used in the Thermal Insulation of Buildings and comply with the Building Code of Australia (BCA) requirements.

### Bio-solubility

Glasswool insulation fibres have been tested in laboratory studies according to EC protocols ECB/TM27 REV. 7, 1998 and shown to be biosoluble. KNS3 fibres comply with the short term biopersistence test and fulfill the requirements of Australian and international authorities on bio-solubility. EarthWool® products are BRANZ certified.

### Features and Benefits

#### Proven Performance

- Excellent acoustic properties reduce sound transmission when properly installed in walls, ceiling and floor systems.
- Preferred by professional installers concerned with quality, appearance and productivity.

#### Superior Handling

- Highly resilient insulation recovers quickly to full thickness for a snug fit and superior finished aesthetics.
- Consistent quality materials feel good, cut easily and install fast.
- Low dust for easier handling and increased productivity.

#### Convenient Packaging, Easier Handling

- Knauf Insulation EarthWool® Sound Control Batts are packaged in a strong, white poly bag that offers excellent protection from abuse, dust and moisture.
- EarthWool® packages feature easy to follow installation instructions.
- Master bag batt units (containing multiple packs) ensure reduced handling costs with improved compression – more square metres per bag, more square metres per truck load, fewer trips to the job site and less warehouse space for storage.

#### Superior Service and Support

- Knauf Insulation is focused on providing first class customer service, producing high quality product and 'on time in full' deliveries.
- Knauf Insulation recognises the need to establish, develop and support a professional network of distributors and re-sellers in order to service a growing insulation market.
- Knauf Insulation is committed to providing a comprehensive range of relevant sales and marketing literature and web-based technical information to support specifiers and customers.

#### Environmental

- EarthWool® Sound Control Batts are free from CFCs, HCFCs and any other material with ozone depletion potential in its manufacture and content and represents no known threat to the environment.
- EarthWool® Sound Control Batts' manufacture has a low impact on the environment and is classified as Zero ODP and Zero GWP.

Knauf Insulation's EarthWool® products with ECOSE® Technology benefit from a formaldehyde-free binder made from rapidly renewable bio-based materials instead of petroleum-based chemicals which is up to 70% less energy intensive. The technology has been developed for Knauf Insulation's glass and rock mineral wool products, enhancing their environmental credentials without affecting the thermal, acoustic or fire performance. EarthWool® products made with ECOSE® Technology contain no dye or artificial colours – the colour is completely natural.

## EarthWool® 11kg/m<sup>3</sup> Acoustic Folded Batt

Thickness (mm)	Density (kg/m <sup>3</sup> )	R-Value (Est)	Dimensions (mm)	Pieces / Pack	m <sup>2</sup> / Pack
<b>EarthWool® Acoustic Folded Batt – Timber Frame</b>					
50	11	1.1	430 X 2700	20	23.2
50	11	1.1	580 X 2700	20	31.3
75	11	1.7	430 X 2700	14	16.2
75	11	1.7	580 X 2700	14	21.9
100	11	2.3	580 X 1160	22	14.8
<b>EarthWool® Acoustic Folded Batt – Metal Frame</b>					
50	11	1.1	450 X 2700	20	24.3
50	11	1.1	600 X 2700	20	32.4
75	11	1.7	450 X 2700	14	17.0
75	11	1.7	600 X 2700	14	22.7

## EarthWool® 14kg/m<sup>3</sup> Sound Control Batts

Thickness (mm)	Density (kg/m <sup>3</sup> )	R-Value (Est)	Dimensions (mm)	Pieces / Pack	m <sup>2</sup> / Pack
<b>EarthWool® Sound Control Batts – Timber Frame</b>					
50	14	1.2	430X1160	38	19.0
50	14	1.2	580X1160	38	25.6
75	14	1.9	430X1160	24	12.0
75	14	1.9	580X1160	24	16.1
<b>EarthWool® Sound Control Batts – Metal Frame</b>					
50	14	1.2	450X1160	38	19.8
50	14	1.2	600X1160	38	26.4
75	14	1.9	450X1160	24	12.5
75	14	1.9	600X1160	24	16.7

### Insulation Recommendations for Internal Walls

Application	R <sub>w</sub> + Ctr	R <sub>w</sub>	Knauf Insulation	Wall Construction
<b>Detached Resident Dwellings</b>				
Internal walls to rooms not containing home theatre or sound systems	NA	38	75mm EarthWool® Sound Control Batts	Single timber stud frame with 10-13mm plasterboard lining each side
Internal walls to rooms with home theatre or sound systems	NA	50+	75mm EarthWool® Sound Control Batts	Double stud timber frame wall with 13-16mm plasterboard lining to each face; or Staggered stud timber frame wall with 16mm plasterboard lining to each face
<b>Selected Walls Table 2 Deemed-to-Satisfy BCA Provisions</b>				
BCA Compliant Acoustic Wall	–	45	50mm EarthWool® Sound Control Batts	One row of 64mm steel studs with: (a) one layer of 16mm fire-protective grade plasterboard fixed to one face; and (b) 50mm 14kg/m <sup>3</sup> Knauf EarthWool® batts positioned between the studs; and (c) two layers of fire-protective grade plasterboard fixed to other face, the inner layer being 16mm and the outer layer being 13mm
BCA Compliant Acoustic Wall	–	50	50mm EarthWool® Sound Control Batts	One row of 92mm steel studs with: (a) 50mm 14kg/m <sup>3</sup> Knauf EarthWool® batts positioned between studs; and (b) two layers of 13mm fire-protective grade plasterboard or one layer of 6mm fibre cement sheet and one layer of 13mm fire-protective grade plasterboard, fixed to each face
BCA Compliant Acoustic Wall	50	50	50mm EarthWool® Sound Control Batts	Two rows of 90x35mm timber studs or two rows of 64mm steel studs at 600mm centres with: (a) an air gap not less than 20mm between the rows of studs; and (b) 50mm 14kg/m <sup>3</sup> Knauf EarthWool® batts positioned between one row of studs; and (c) two layers of 13mm fire-protective grade plasterboard or one layer of 6mm fibre cement sheet and one layer of 13mm fire-protective grade plasterboard, fixed to outside face of studs

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