

## Appendix to Certificate of Verification

Appendix Number: ENP506e Issue: 1

### Knauf Insulation Ltd

Stafford Road  
St Helens  
Merseyside  
WA10 3NS

### Characterised and normalised data for:

#### Insulation:

Knauf Glass Mineral Wool insulation with ECOSE Technology (0.040-0.046 W/mK) - density 13 kg/m³

Including: Earthwool Loft Roll 44; Earthwool Space Blanket; Earthwool Universal Roll; Earthwool Acoustic Roll (75mm); Earthwool Acoustic Roll (100mm); Earthwool Building Roll; Earthwool SteelTherm Roll 40; Earthwool FactoryClad 40; Kalzip Plus 40; Earthwool FrameTherm Roll 40; Earthwool Loft Roll 40; Space Roll 039; Earthwool OmniFit Roll; Knauf Insulation Glass MW Roll 10kg; Knauf Insulation Glass OEM Roll; Kalzip Plus 40; Therma-quilt

1 m² over 60-year study period


### Quality of data for profiled material

Start date	01/01/2012
End date	31/12/2012
Representativeness	1 site representing 100% production
LCA Methodology	BRE Environmental Profiles Methodology 2008
Allocation	100% to product
Date of data entry	16/03/2015
Boundary	Cradle to Grave over 60-year study period
Applicable buildings	All building types
Source of data	Company records
Geography	UK

(Data for other constituent materials are available from BRE Global)

### BRE Ecopoints score: 0.0133 Ecopoints

This certificate appendix is maintained and held in force through annual review and verification.



Signed for BRE Global Ltd.

Derek Hughes  
Certification Schemes Manager

11 May 2015  
Date of Issue

05 January 2018  
Expiry Date



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Issue: 1

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(0.040-0.046 W/mK) - density 13 kg/m³

1 m² over 60-year study period

### Characterised Data

Issue	Value	Unit
Climate Change	2.24	kg CO <sub>2</sub> eq. (100 yr.)
Water Extraction	0.027	m³
Mineral Resource Extraction	0.000645	tonnes
Stratospheric Ozone Depletion	0.00000176	kg CFC 11 eq.
Human Toxicity	0.392	kg 1,4-DB eq.
Ecotoxicity to Freshwater	0.0383	kg 1,4-DB eq.
Nuclear Waste (higher level)	0.00000000653	m³ high level waste
Ecotoxicity to Land	0.00987	kg 1,4-DB eq.
Waste Disposal	2.03	kg
Fossil Fuel Depletion	36.8	MJ
Eutrophication	0.00248	kg PO <sub>4</sub> eq.
Photochemical Ozone Creation	0.000945	kg ethene eq.
Acidification	0.0113	kg SO <sub>2</sub> eq.

### Normalised Data

Issue	Value	Western European Citizen's Annual Impacts
Climate Change	0.000182	12300 kg CO <sub>2</sub> eq. (100 yr.)
Water Extraction	0.0000715	378 m³
Mineral Resource Extraction	0.0000264	24.4 tonnes
Stratospheric Ozone Depletion	0.00000812	0.217 kg CFC 11 eq.
Human Toxicity	0.0000199	19700 kg 1,4-DB eq.
Ecotoxicity to Freshwater	0.0000291	1320 kg 1,4-DB eq.
Nuclear Waste (higher level)	0.000275	2.37 x 10 <sup>-5</sup> m³ high level waste
Ecotoxicity to Land	0.0000803	123 kg 1,4-DB eq.
Waste Disposal	0.00054	3750 kg
Fossil Fuel Depletion	0.000135	273 GJ
Eutrophication	0.0000764	32.5 kg PO <sub>4</sub> eq.
Photochemical Ozone Creation	0.0000439	21.5 kg ethene eq.
Acidification	0.000159	71.2 kg SO <sub>2</sub> eq.

**BRE Ecopoints score: 0.0133 Ecopoints**

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*D. Hughes*

Signed for BRE Global Ltd.

Derek Hughes

Certification Schemes Manager

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