

## Appendix to Certificate of Approval

Appendix Number: ENP508e Issue: 3

**Ravago Building Solutions UK Ltd**  
**Beech Farm Offices**  
**Lymm Road**  
**Warrington**  
**WA4 2TG**



Characterised and normalised data for:

### Insulation: Insulation

Ravatherm XPS X 300 SL insulation with carbon dioxide blowing agent, 0.031 W/mK, 34 kg/m<sup>3</sup>

1 m<sup>2</sup> over 60-year study period

### Quality of data for profiled material

Start date	01/01/2016
End Date	31/12/2016
Representativeness	1 site representing 100% production
LCA Methodology	BRE Environmental Profiles Methodology 2008
Allocation	100% to product
Date of data entry	18/06/2018
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: 0.0482 Ecopoints

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

Signed for BRE Global Ltd.

Emma Baker  
Scheme Manager

14 February 2020  
Date of Issue

29 August 2021  
Expiry Date



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## Appendix No: ENP508e

### Ravago Building Solutions UK Ltd

Beech Farm Offices  
Lymm Road  
Warrington  
WA4 2TG

Issue: 3

#### Insulation: Insulation

Ravatherm XPS X 300 SL insulation with carbon dioxide blowing agent, 0.031 W/mK, 34 kg/m<sup>3</sup>

**1 m<sup>2</sup> over 60-year study period**

#### Characterised Data

Issue	Value	Unit
Climate Change	13.8	kg CO <sub>2</sub> eq. (100 yr.)
Water Extraction	0.169	m <sup>3</sup>
Mineral Resource Extraction	0.000223	tonnes
Stratospheric Ozone Depletion	0.000022	kg CFC11 eq.
Human Toxicity	1.67	kg 1,4-DB eq.
Ecotoxicity to Freshwater	0.0462	kg 1,4-DB eq.
Nuclear Waste (higher level)	0.00000001	m <sup>3</sup> high level waste
Ecotoxicity to Land	0.0122	kg 1,4-DB eq.
Waste Disposal	3.81	kg
Fossil Fuel Depletion	308	MJ
Eutrophication	0.00679	kg PO <sub>4</sub> eq.
Photochemical Ozone Creation	0.0157	kg ethene eq.
Acidification	0.0751	kg SO <sub>2</sub> eq.

#### Normalised data

Issue	Value	Western European Citizen's Annual Impacts
Climate Change	0.00112	12300 kg CO <sub>2</sub> eq. (100 yr.)
Water Extraction	0.000447	378 m <sup>3</sup>
Mineral Resource Extraction	0.00000912	24.4 tonnes
Stratospheric Ozone Depletion	0.000101	0.217 kg CFC11 eq.
Human Toxicity	0.0000845	19700 kg 1,4-DB eq.
Ecotoxicity to Freshwater	0.0000351	1320 kg 1,4-DB eq.
Nuclear Waste (higher level)	0.000424	2.37 x 10 <sup>-5</sup> m <sup>3</sup> high level waste
Ecotoxicity to Land	0.000099	123 kg 1,4-DB eq.
Waste Disposal	0.00101	3750 kg
Fossil Fuel Depletion	0.00113	273 GJ
Eutrophication	0.000209	32.5 kg PO <sub>4</sub> eq.
Photochemical Ozone Creation	0.000728	21.5 kg ethene eq.
Acidification	0.00105	71.2 kg SO <sub>2</sub> eq.

**BRE Ecopoints score: 0.0482 Ecopoints**

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Scheme Manager

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