

# ENVIRONMENTAL PRODUCT DECLARATION

as per ISO 14025 and EN 15804+A2

|                          |                                      |
|--------------------------|--------------------------------------|
| Owner of the Declaration | Kingspan Insulation B.V.             |
| Publisher                | Institut Bauen und Umwelt e.V. (IBU) |
| Programme holder         | Institut Bauen und Umwelt e.V. (IBU) |
| Declaration number       | EPD-KIN-20230169-CBA1-EN             |
| Issue date               | 11.07.2023                           |
| Valid to                 | 10.07.2028                           |

**Therma™ TW58**  
**Kingspan Insulation B.V.**

[www.ibu-epd.com](http://www.ibu-epd.com) | <https://epd-online.com>



## General Information

### Kingspan Insulation B.V.

#### Programme holder

IBU – Institut Bauen und Umwelt e.V.  
Hegelplatz 1  
10117 Berlin  
Germany

#### Declaration number

EPD-KIN-20230169-CBA1-EN

#### This declaration is based on the product category rules:

Insulating materials made of foam plastics, 01.08.2021  
(PCR checked and approved by the SVR)

#### Issue date

11.07.2023

#### Valid to

10.07.2028



Dipl.-Ing. Hans Peters  
(Chairman of Institut Bauen und Umwelt e.V.)



Florian Pronold  
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### Therma™ TW58

#### Owner of the declaration

Kingspan Insulation B.V.  
Lingewei 8  
4004LL Tiel  
Netherlands

#### Declared product / declared unit

Therma™ TW58  
1m<sup>2</sup>, 120mm thickness, R<sub>D</sub> = 5,45 m<sup>2</sup>.K/W

#### Scope:

The insulation material Therma™ TW58 is produced by Kingspan Insulation at the manufacturing facility in Kankaanpää (Finland).

Therma™ TW58 is an insulation board with a rigid thermoset polyisocyanurate (PIR) fibre-free insulation core, faced on both sides with a low emissivity composite foil. Therma™ TW58 Concrete element insulation is used as thermal insulation in the industrial production of concrete elements.

In order to enable the user of the EPD to calculate the LCA results for different thicknesses, the EPD contains the respective calculation rules. The owner of the declaration shall be liable for the underlying information and evidence; the IBU shall not be liable with respect to manufacturer information, life cycle assessment data and evidences.

The EPD was created according to the specifications of EN 15804+A2. In the following, the standard will be simplified as *EN 15804*.

#### Verification

|  |            |
|--|------------|
| The standard EN 15804 serves as the core PCR                                     |            |
| Independent verification of the declaration and data according to ISO 14025:2011 |            |
| <input type="checkbox"/>   | internally |
| <input checked="" type="checkbox"/>  | externally |



Vito D'Incognito,  
(Independent verifier)

## Product

### Product description/Product definition

Therma™ TW58 is an insulation board with a rigid thermoset polyisocyanurate (PIR) fibre-free insulation core, faced on both sides with a low emissivity composite foil. The product is available in variable thicknesses from 20 mm up to 200 mm. This EPD is based on a thickness of 120 mm and  $R_D$ -value of 5,45 m<sup>2</sup>-K/W. For the placing on the market of the product in the European Union/European Free Trade Association (EU/EFTA) (with the exception of Switzerland) Regulation (EU) No. 305/2011 (CPR) applies. The product needs a declaration of performance taking into consideration EN 13165 - Thermal insulation products for buildings - Factory made polyurethane foam (PU) products - specification and the CE-marking. For the application and use the respective national provisions apply.

### Application

Therma™ TW58 Concrete element insulation is used as thermal insulation in the industrial production of concrete elements.

### Technical Data

#### Constructional data

| Name                                       | Value           | Unit   |
|--|-----------------|--------|
| Thermal conductivity according to EN 13165 | 0.022           | W(m.K) |
| Reaction to fire acc. to EN 13165          | F               |        |
| Compressive strength acc. to EN 13165      | CS(10\Y)<br>100 |        |
| Thickness tolerance according to EN 13165  | T2              |        |

Performance data of the product in accordance with the declaration of performance with respect to its essential

characteristics according to EN 13165 - Thermal insulation products for buildings - Factory made rigid polyurethane foam (PU) products - Specification  
The declaration of performance of the product can be found at [www.kingspan.com](http://www.kingspan.com).

### Base materials/Ancillary materials

The product contains approximately 3,3 kg/m<sup>2</sup> polyurethane rigid foam and 0,3 kg/m<sup>2</sup> multi-layer aluminium facings. The main materials of the polyurethane foam are MDI (between 57-62 %), polyol (between 27-32 %) and a blowing agent (between 5-6 %). Due to the closed cell structure (conform EN 13165), the blowing agent remains in the foam. Water, flame retardants and additives are added (between 4-8 %).

In the current REACH regulations, polyurethane foam insulation products are considered 'articles' and are exempt from the requirements of Articles 57 and 59(1) of REACH Regulation (EC) No 1907/2006. These products are not classified as 'hazardous products' according to any current legislation, and can hence be declared as follows:

- This article contains substances listed in the candidate list (date: 31.08.2022) exceeding 0.1 percentage by mass: no.
- This article contains other carcinogenic, mutagenic, reprotoxic (CMR) substances in categories 1A or 1B which are not on the candidate list, exceeding 0.1 percentage by mass: no.
- Biocide products were added to this construction product or it has been treated with biocide products (this then concerns a treated product as defined by the (EU) Biocidal Products Regulation No. 528/2012 (BPR): no.

### Reference service life

The reference service life is not to be declared in this EPD as it does not cover the use stage.

## LCA: Calculation rules

### Declared Unit

The declared unit (1 m<sup>2</sup>) and conversion factors are listed in the table below.

#### Declared unit

| Name            | Value | Unit              |
|-----------------|-------|-------------------|
| Declared unit   | 1     | m <sup>2</sup>    |
| Gross density   | 30    | kg/m <sup>3</sup> |
| Grammage        | 3.6   | kg/m <sup>2</sup> |
| Layer thickness | 0.12  | m                 |

The scope of this EPD is the thermal insulation product Therma™ TW58 as produced by Kingspan Insulation at the manufacturing facility in Kankaanpää (Finland). The environmental impacts have been calculated over the calendar year 2021.

The EPD is studied for a common product thickness of 120 mm. Multiplication factors are included to calculate impacts for other product thicknesses within the range of 20 to 200 mm.

### System boundary

The type of EPD according to EN 15804 is: cradle to gate with options, modules C1–C4, and module D (A1–A3, C, D and additional modules: A4, A5).

The product stage is a mandatory information module and it

covers:

- A1, raw material extraction and processing, processing of secondary material input (e.g. recycling processes),
- A2, transport to the manufacturer,
- A3, manufacturing, including provision of all materials, products and energy, packaging processing and its transport, as well as waste processing up to the end-of-waste state or disposal of final residues during the product stage.

The construction process stage includes:

- A4 transport to the building site;
- A5 installation in the building including provision of all materials, products and energy, as well as waste processing up to the end-of-waste state or disposal of final residues during the construction process stage.

The end-of-life stage is a mandatory information module and it covers:

- C1 de-construction, demolition;
- C2 transport to waste processing;
- C3 waste processing for reuse, recovery and/or recycling;
- C4 disposal (not applicable for this EPD) including provision and all transport, provision of all materials, products and related energy and water use.

Environmental burden of the incineration (R1 > 60 %) of the product at the end-of-life stage are assigned to the product system (C3); resulting potential credits for thermal and electrical energy from energy substitution are declared in module D.

### Geographic Representativeness

Land or region, in which the declared product system is manufactured, used or handled at the end of the product's lifespan: Europe

### Comparability

Basically, a comparison or an evaluation of EPD data is only possible if all the data sets to be compared were created according to *EN 15804* and the building context, respectively the product-specific characteristics of performance, are taken

into account.

### Background database

Background data from GaBi ts Version 10 is used with GaBi data sets CUP2022.1.

### Period under review

The input data for raw material production and the consumption of process energy on the manufacturing facility was measure data during January 1st 2021 to December 31st 2021, i.e. collected over a 12 month period.

## LCA: Scenarios and additional technical information

### Characteristic product properties of biogenic carbon

The total mass of biogenic carbon containing materials is less than 5 % of the total mass of the product and accompanying packaging.

### Technical information

The following technical information is a basis for the declared modules or can be used for developing specific scenarios in the context of a building assessment.

### Manufacturing (A3)

A polyethylene packaging foil is used. The products are transported on wooden pallets.

Within Module A3 the following packaging of the final product is included:

- Polyethylene cover and wrap: 0,038 kg/m<sup>2</sup> - Wooden pallet: 0,068 kg/m<sup>2</sup>

### Transport to the building site (A4)

| Name                                  | Value  | Unit              |
|---------------------------------------|--------|-------------------|
| Litres of fuel                        | 0.0103 | l/100km           |
| Transport distance                    | 100    | km                |
| Gross density of products transported | 30     | kg/m <sup>3</sup> |

### Installation into the building (A5)

| Name  | Value | Unit |
|---|-------|------|
| Output substances following waste treatment on site | 0.106 | kg   |

The recycling of the packaging is considered in A5.

### End of life (C1-C4)

The assumptions for C1 are: diesel driven excavator (100 kW; 0.2 litre fuel per ton excavated material). The assumptions for C2 are: Truck Euro 6, diesel driven, 26-28 t gross weight, assumed distance 50 km

| Name   | Value | Unit |
|--|-------|------|
| Collected as mixed construction waste                              | 3.6   | kg   |
| Energy recovery  | 3.975 | kg   |
| Recycling (aluminium content of the multi-layer aluminium facings) | 0.025 | kg   |

### Reuse, recovery and/or recycling potentials (D), relevant scenario information

Waste incineration with energy recuperation is assumed as end-of-life scenario

## LCA: Results

DESCRIPTION OF THE SYSTEM BOUNDARY (X = INCLUDED IN LCA; ND = MODULE OR INDICATOR NOT DECLARED; MNR = MODULE NOT RELEVANT)

| Product stage       |           |               | Construction process stage          |          | Use stage |             |        |             |               |                        |                       | End-of-life stage          |           |                  |          | Benefits and loads beyond the system boundaries |
|---------------------|-----------|---------------|-------------------------------------|----------|-----------|-------------|--------|-------------|---------------|------------------------|-----------------------|----------------------------|-----------|------------------|----------|---|
| Raw material supply | Transport | Manufacturing | Transport from the gate to the site | Assembly | Use       | Maintenance | Repair | Replacement | Refurbishment | Operational energy use | Operational water use | De-construction demolition | Transport | Waste processing | Disposal | Reuse-Recovery-Recycling-potential              |
| A1                  | A2        | A3            | A4                                  | A5       | B1        | B2          | B3     | B4          | B5            | B6                     | B7                    | C1                         | C2        | C3               | C4       | D   |
| X                   | X         | X             | X                                   | X        | MND       | MND         | MNR    | MNR         | MNR           | MND                    | MND                   | X                          | X         | X                | X        | X   |

### RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A2: 1m2 120mm Therma™ TW58

| Parameter      | Unit                             | A1-A3     | A4        | A5       | C1       | C2        | C3       | C4 | D         |
|----------------|----------------------------------|-----------|-----------|----------|----------|-----------|----------|----|-----------|
| GWP-total      | kg CO <sub>2</sub> eq            | 1.05E+01  | 3.03E-02  | 2.19E-01 | 2.31E-03 | 1.52E-02  | 7.79E+00 | 0  | -3.2E+00  |
| GWP-fossil     | kg CO <sub>2</sub> eq            | 1.08E+01  | 3.02E-02  | 9.67E-02 | 2.31E-03 | 1.51E-02  | 7.63E+00 | 0  | -3.19E+00 |
| GWP-biogenic   | kg CO <sub>2</sub> eq            | -3.27E-01 | -4.17E-05 | 1.22E-01 | 3.09E-06 | -2.08E-05 | 1.66E-01 | 0  | -1.58E-02 |
| GWP-luluc      | kg CO <sub>2</sub> eq            | 7.92E-03  | 1.68E-04  | 1.36E-06 | 2.85E-08 | 8.41E-05  | 1.43E-05 | 0  | -3.64E-04 |
| ODP            | kg CFC11 eq                      | 1.21E-11  | 1.81E-15  | 2.61E-14 | 1.41E-16 | 9.04E-16  | 5.77E-13 | 0  | -2.05E-11 |
| AP             | mol H <sup>+</sup> eq            | 2.28E-02  | 3.11E-05  | 2.92E-05 | 1.07E-05 | 1.56E-05  | 4.55E-03 | 0  | -4.9E-03  |
| EP-freshwater  | kg P eq                          | 4.42E-05  | 9.01E-08  | 6.47E-09 | 4.65E-10 | 4.5E-08   | 1.56E-07 | 0  | -4.21E-06 |
| EP-marine      | kg N eq                          | 5.9E-03   | 1.02E-05  | 8.87E-06 | 5.1E-06  | 5.09E-06  | 2.2E-03  | 0  | -1.18E-03 |
| EP-terrestrial | mol N eq                         | 6.14E-02  | 1.21E-04  | 1.37E-04 | 5.59E-05 | 6.05E-05  | 2.53E-02 | 0  | -1.27E-02 |
| POCP           | kg NMVOC eq                      | 2.67E-02  | 2.74E-05  | 2.46E-05 | 1.45E-05 | 1.37E-05  | 5.64E-03 | 0  | -3.35E-03 |
| ADPE           | kg Sb eq                         | 1.02E-05  | 2.52E-09  | 6.38E-10 | 9.44E-11 | 1.26E-09  | 1.58E-08 | 0  | -4.66E-07 |
| ADPF           | MJ                               | 2.77E+02  | 4.03E-01  | 6.05E-02 | 3.12E-02 | 2.02E-01  | 2.02E+00 | 0  | -5.33E+01 |
| WDP            | m <sup>3</sup> world eq deprived | 1.55E+00  | 2.71E-04  | 2.18E-02 | 4.29E-06 | 1.35E-04  | 7.72E-01 | 0  | -3.5E-01  |

GWP = Global warming potential; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential of land and water; EP = Eutrophication potential; POCP = Formation potential of tropospheric ozone photochemical oxidants; ADPE = Abiotic depletion potential for non-fossil resources; ADPF = Abiotic depletion potential for fossil resources; WDP = Water (user) deprivation potential)

### RESULTS OF THE LCA - INDICATORS TO DESCRIBE RESOURCE USE according to EN 15804+A2: 1m2 120mm Therma™ TW58

| Parameter | Unit           | A1-A3    | A4       | A5        | C1       | C2       | C3        | C4 | D         |
|-----------|----------------|----------|----------|-----------|----------|----------|-----------|----|-----------|
| PERE      | MJ             | 2.49E+01 | 2.29E-02 | 1.04E+00  | 1.18E-04 | 1.15E-02 | 3.54E-01  | 0  | -1.52E+01 |
| PERM      | MJ             | 1.02E+00 | 0        | -1.02E+00 | 0        | 0        | 0         | 0  | 0         |
| PERT      | MJ             | 2.59E+01 | 2.29E-02 | 1.49E-02  | 1.18E-04 | 1.15E-02 | 3.54E-01  | 0  | -1.52E+01 |
| PENRE     | MJ             | 1.65E+02 | 4.04E-01 | 1.7E+00   | 3.13E-02 | 2.02E-01 | 1.13E+02  | 0  | -5.34E+01 |
| PENRM     | MJ             | 1.12E+02 | 0        | -1.63E+00 | 0        | 0        | -1.11E+02 | 0  | 0         |
| PENRT     | MJ             | 2.77E+02 | 4.04E-01 | 6.06E-02  | 3.13E-02 | 2.02E-01 | 2.02E+00  | 0  | -5.34E+01 |
| SM        | kg             | 0        | 0        | 0         | 0        | 0        | 0         | 0  | 0         |
| RSF       | MJ             | 0        | 0        | 0         | 0        | 0        | 0         | 0  | 0         |
| NRSF      | MJ             | 0        | 0        | 0         | 0        | 0        | 0         | 0  | 0         |
| FW        | m <sup>3</sup> | 7.59E-02 | 2.59E-05 | 5.14E-04  | 1.78E-07 | 1.3E-05  | 1.82E-02  | 0  | -1.64E-02 |

PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water

### RESULTS OF THE LCA - WASTE CATEGORIES AND OUTPUT FLOWS according to EN 15804+A2: 1m2 120mm Therma™ TW58

| Parameter | Unit | A1-A3    | A4       | A5       | C1       | C2       | C3       | C4 | D         |
|-----------|------|----------|----------|----------|----------|----------|----------|----|-----------|
| HWD       | kg   | 1.11E-07 | 1.94E-12 | 5.38E-12 | 1.03E-13 | 9.68E-13 | 2.76E-10 | 0  | -6.6E-09  |
| NHWD      | kg   | 2.88E-01 | 5.79E-05 | 9.41E-03 | 2.93E-06 | 2.9E-05  | 4.37E-02 | 0  | -8.04E-02 |
| RWD       | kg   | 4.93E-03 | 4.98E-07 | 2.97E-06 | 3.43E-08 | 2.49E-07 | 8.4E-05  | 0  | -4.17E-03 |
| CRU       | kg   | 0        | 0        | 0        | 0        | 0        | 0        | 0  | 0         |
| MFR       | kg   | 0        | 0        | 0        | 0        | 0        | 2.54E-02 | 0  | 0         |
| MER       | kg   | 0        | 0        | 1.06E-01 | 0        | 0        | 3.46E+00 | 0  | 0         |
| EEE       | MJ   | 0        | 0        | 3.5E-01  | 0        | 0        | 1.32E+01 | 0  | 0         |
| EET       | MJ   | 0        | 0        | 6.28E-01 | 0        | 0        | 2.36E+01 | 0  | 0         |



HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy

**RESULTS OF THE LCA – additional impact categories according to EN 15804+A2-optional:  
1m2 120mm Therma™ TW58**

| Parameter | Unit              | A1-A3    | A4       | A5       | C1       | C2       | C3       | C4 | D         |
|-----------|-------------------|----------|----------|----------|----------|----------|----------|----|-----------|
| PM        | Disease incidence | 2.06E-07 | 1.8E-10  | 2.3E-10  | 1.21E-10 | 8.98E-11 | 1.27E-08 | 0  | -4.26E-08 |
| IR        | kBq U235 eq       | 5.54E-01 | 7.3E-05  | 4.47E-04 | 4.99E-06 | 3.65E-05 | 1.35E-02 | 0  | -7.13E-01 |
| ETP-fw    | CTUe              | 1.13E+02 | 2.8E-01  | 3.63E-02 | 2.17E-02 | 1.4E-01  | 6.96E-01 | 0  | -1.21E+01 |
| HTP-c     | CTUh              | 7.24E-09 | 5.64E-12 | 2.17E-12 | 4.02E-13 | 2.82E-12 | 5.21E-11 | 0  | -6.28E-10 |
| HTP-nc    | CTUh              | 6.28E-07 | 2.93E-10 | 1.69E-10 | 2.03E-11 | 1.46E-10 | 1.9E-09  | 0  | -2.21E-08 |
| SQP       | SQP               | 8.31E+01 | 1.39E-01 | 1.65E-02 | 8.61E-05 | 6.94E-02 | 4.26E-01 | 0  | -9.2E+00  |

PM = Potential incidence of disease due to PM emissions; IR = Potential Human exposure efficiency relative to U235; ETP-fw = Potential comparative Toxic Unit for ecosystems; HTP-c = Potential comparative Toxic Unit for humans (cancerogenic); HTP-nc = Potential comparative Toxic Unit for humans (not cancerogenic); SQP = Potential soil quality index

Disclaimer 1 – for the indicator 'Potential Human exposure efficiency relative to U235'. This impact category deals mainly with the eventual impact of low-dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure or to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, radon and from some construction materials is also not measured by this indicator.

Disclaimer 2 – for the indicators 'abiotic depletion potential for non-fossil resources', 'abiotic depletion potential for fossil resources', 'water (user) deprivation potential, deprivation-weighted water consumption', 'potential comparative toxic unit for ecosystems', 'potential comparative toxic unit for humans – cancerogenic', 'Potential comparative toxic unit for humans - not cancerogenic', 'potential soil quality index'. The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high as there is limited experience with the indicator.

**Factors for different thicknesses**

The LCA results for the insulation material declared in this EPD refer to a product with a thickness of 120 mm. To enable the user of the EPD to calculate the results for different thicknesses the factors in the following table can be used for the calculation. The LCA results in chapter 5 have to be multiplied with these factors.

|                  | Module A1 - A3 |       |       |       |       | Modules A4/A5/C1/C2/C3 |       |       |       |       | Module D |       |       |       |       |
|------------------|----------------|-------|-------|-------|-------|------------------------|-------|-------|-------|-------|----------|-------|-------|-------|-------|
|                  | 20mm           | 100mm | 120mm | 140mm | 200mm | 20mm                   | 100mm | 120mm | 140mm | 200mm | 20mm     | 100mm | 120mm | 140mm | 200mm |
| GWP - total      | 0,22           | 0,80  | 1,00  | 1,13  | 1,62  | 0,25                   | 0,83  | 1,00  | 1,16  | 1,66  | 0,22     | 0,78  | 1,00  | 1,10  | 1,59  |
| GWP - fossil     | 0,23           | 0,81  | 1,00  | 1,13  | 1,62  | 0,25                   | 0,83  | 1,00  | 1,16  | 1,66  | 0,22     | 0,78  | 1,00  | 1,10  | 1,59  |
| GWP - biogenic   | 0,91           | 1,31  | 1,00  | 1,52  | 1,84  | 0,25                   | 0,83  | 1,00  | 1,16  | 1,66  | 0,19     | 0,78  | 1,00  | 1,11  | 1,60  |
| GWP - luluc      | 0,24           | 0,95  | 1,00  | 1,35  | 1,95  | 0,25                   | 0,83  | 1,00  | 1,16  | 1,66  | 0,25     | 0,79  | 1,00  | 1,10  | 1,57  |
| ODP              | 0,22           | 0,41  | 1,00  | 0,51  | 0,68  | 0,25                   | 0,83  | 1,00  | 1,16  | 1,66  | 0,18     | 0,77  | 1,00  | 1,11  | 1,62  |
| AP               | 0,26           | 0,84  | 1,00  | 1,16  | 1,65  | 0,25                   | 0,83  | 1,00  | 1,16  | 1,66  | 0,33     | 0,81  | 1,00  | 1,09  | 1,50  |
| EP - freshwater  | 0,24           | 0,75  | 1,00  | 1,03  | 1,47  | 0,25                   | 0,83  | 1,00  | 1,16  | 1,66  | 0,18     | 0,77  | 1,00  | 1,11  | 1,61  |
| EP - marine      | 0,25           | 0,83  | 1,00  | 1,16  | 1,65  | 0,25                   | 0,83  | 1,00  | 1,16  | 1,66  | 0,25     | 0,79  | 1,00  | 1,10  | 1,56  |
| EP - terrestrial | 0,25           | 0,83  | 1,00  | 1,16  | 1,66  | 0,25                   | 0,83  | 1,00  | 1,16  | 1,66  | 0,25     | 0,79  | 1,00  | 1,10  | 1,56  |
| POCP             | 0,22           | 0,75  | 1,00  | 1,07  | 1,53  | 0,25                   | 0,83  | 1,00  | 1,16  | 1,66  | 0,25     | 0,79  | 1,00  | 1,10  | 1,56  |
| ADPF             | 0,18           | 0,80  | 1,00  | 1,14  | 1,67  | 0,25                   | 0,83  | 1,00  | 1,16  | 1,66  | 0,19     | 0,78  | 1,00  | 1,11  | 1,61  |
| ADPE             | 0,23           | 0,82  | 1,00  | 1,15  | 1,65  | 0,25                   | 0,83  | 1,00  | 1,16  | 1,66  | 0,21     | 0,78  | 1,00  | 1,11  | 1,60  |
| WDP              | 0,22           | 0,79  | 1,00  | 1,12  | 1,61  | 0,25                   | 0,83  | 1,00  | 1,16  | 1,66  | 0,24     | 0,79  | 1,00  | 1,10  | 1,57  |

This EPD was created using a software tool.

**References**

**Biocidal Products Regulation No. 528/2012 (BPR)**

Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products

**CPR**

Regulation (EU) No. 305/2011 of the European Parliament and of the Council of 9 March 2011 laying down harmonised condition for the marketing of construction products and repealing Council Directive 89/106/EC

**ISO 14025**

EN ISO 14025:2011, Environmental labels and declarations — Type III environmental declarations — Principles and procedures.

**EN 13165**

EN 13165:2012+A2:2016: Thermal insulation products for buildings. Factory made polyurethane foam (PU) products.

Specification

**EN 15804**

EN 15804:2012+A2:2019+AC:2021, Sustainability of construction works — Environmental Product Declarations — Core rules for the product category of construction products.

**GaBi ts**

thinkstep AG: Leinfelden-Echterdingen GaBi Software- System and Database for Life Cycle Engineering 1992- 2019

**IBU 2022**

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