

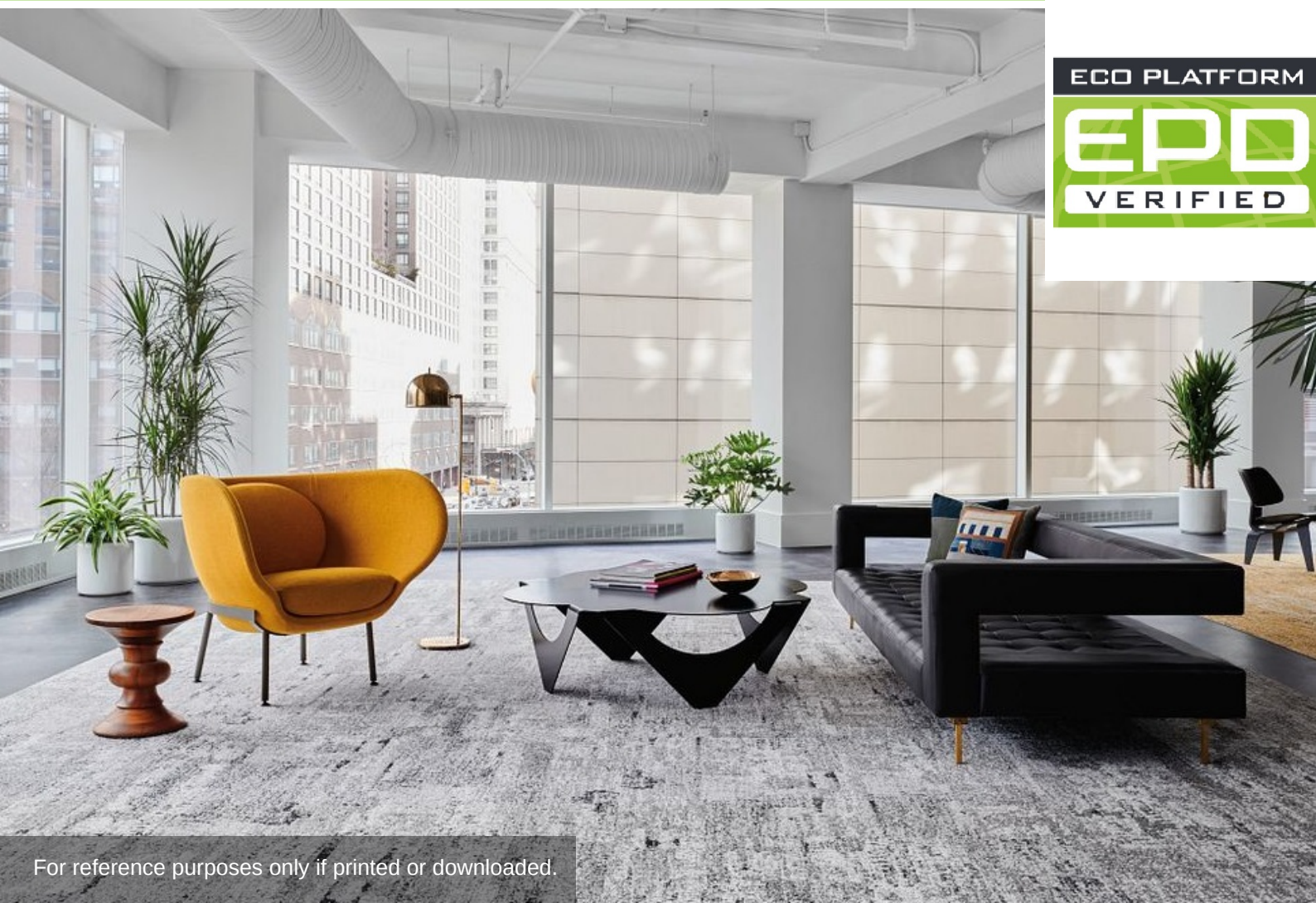
# ENVIRONMENTAL PRODUCT DECLARATION

as per ISO 14025 and EN 15804+A2

|                          |                                      |
|--------------------------|--------------------------------------|
| Owner of the Declaration | Shaw Contract (Shaw Europe Ltd.)     |
| Publisher                | Institut Bauen und Umwelt e.V. (IBU) |
| Programme holder         | Institut Bauen und Umwelt e.V. (IBU) |
| Declaration number       | EPD-SHA-20220301-CCA2-EN             |
| Issue date               | 19.09.2023                           |
| Valid to                 | 18.09.2028                           |

## TaskWorx® Carpet Tile with EcoSolution Q100™ Face Fibre Shaw Contract (Shaw Europe Ltd.)

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



## General Information

### Shaw Contract (Shaw Europe Ltd.)

**Programme holder**

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

**Declaration number**

EPD-SHA-20220301-CCA2-EN

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

Floor coverings, 01.08.2021  
(PCR checked and approved by the SVR)

**Issue date**

19.09.2023

**Valid to**

18.09.2028



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



Florian Pronold  
(Managing Director Institut Bauen und Umwelt e.V.)

### TaskWorx® Carpet Tile with EcoSolution Q100™ Face Fibre

**Owner of the declaration**

Shaw Contract (Shaw Europe Ltd.)  
Blackaddie Road \*  
DG46DB Sanquhar  
United Kingdom

**Declared product / declared unit**

1 m<sup>2</sup> of installed TaskWorx® Carpet Tile

**Scope:**

A Life Cycle Assessment (LCA) was conducted based upon production data collected from Shaw Contract (Shaw Europe, Ltd.), Plant SQ manufacturing facility (Blackaddie Road, Sanquhar, DG46DB), located in Scotland, UK. Production data was collected for TaskWorx® Carpet Tile with EcoSolution Q100™ Face Fibre, for the period of one year, from January to December 2021.

This EPD is cradle-to-gate with options in scope with additional modules A4, A5, B1 and B2. The EPD is created in accordance to the specifications of EN 15804+A2.

The functional unit has been defined as 1m<sup>2</sup> of installed TaskWorx® Carpet Tile.

The EPD was generated with the help of an LCA Tool, version 1. 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

☐ internally ☒ externally



Mrs Kim Allbury,  
(Independent verifier)

## Product

### Product description/Product definition

This EPD covers all products which comprise the TaskWorx® collection and which feature the TaskWorx® backing system together with EcoSolution Q100™ Nylon face fibre.

TaskWorx® is a commercial carpet tile, for use as a floor covering in accordance with the manufacturer's guidelines.

The carpet tile consists of Shaw's unique face fibre, Nylon 6, manufactured with 100% recycled material on the TaskWorx® backing system, a modified bitumen compound with 100% natural recycled mineral filler, and a fibreglass reinforcement layer.

The EcoSolution Q100™ face fibre is tufted into a primary backing sheet containing recycled content. Latex is added to anchor the fibre and the TaskWorx® backing system is then applied.

TaskWorx® is suitable for use in all commercial settings. It has a life span of 15 years, and it comes with a 15-year warranty (subject only to installation and maintenance being carried out in line with manufacturer's guidelines).

The product meets both internal and external performance standards including those established in the EU under EN 1307 and EN 10874 for a product suitable for heavy and general commercial installations.

At the end of product life, the Shaw Contract take back recycling scheme: re[TURN]® is available for this product. Details may be obtained at [www.shawcontract.com](http://www.shawcontract.com). 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 14041:2004A/C:2006, and the CE-marking.

For the application and use the respective national provisions apply.

### Application

TaskWorx® Carpet Tile with EcoSolution Q100™ Face Fibre is suitable for use as a floor covering in heavy and general commercial installations.

### Technical Data

The technical specifications of the product are listed on the product's specification sheet, found at [www.shawcontract.com](http://www.shawcontract.com). This product meets the requirements of the harmonized European Norm (hEN): EN14041:2004A/C:2006. Declarations of performance related to fire, electrostatic, formaldehyde emissions, and slip resistance can be found on the product's specification sheet.

### Constructional data

| Name                                    | Value                                 | Unit             |
|-----------------------------------------|---------------------------------------|------------------|
| Product Form                            | Carpet Tile                           | -                |
| Yarn type - Solution-dyed Nylon 6       | 100% Post-industrial Recycled Content | -                |
| Total thickness                         | 6 - 8                                 | mm               |
| Total carpet weight                     | 4094 - 5163                           | g/m <sup>2</sup> |
| Surface pile thickness                  | 1.2 - 3.4                             | mm               |
| Surface pile weight - Nominal Pile Mass | 576 - 949                             | g/m <sup>2</sup> |
| Length and width of squared elements    | 250 - 1000                            | mm               |

Other technical data parameters listed in IBU PCR Part B are not relevant and, therefore, have not been declared.

Performance data of the product in accordance with the declaration of performance with respect to its essential characteristics according to 14041:2004A/C:2006.

### Base materials/Ancillary materials

TaskWorx® Carpet Tile with EcoSolution Q100™ Face Fibre is comprised of the following raw materials:

- 40-60% Calcium Carbonate, containing Recycled Content
- 18-20% Modified Bitumen Polymer
- 15-18% Solution Dyed Nylon 6 Face Fibre, containing 100% Post-industrial Recycled Content
- 3-5% Styrene Butadiene Co-Polymer Latex
- 2-5% Polyester Primary & Secondary Backing
- 0.5-2% Fibreglass Reinforcement
- 0-0.25% Anti-stat

The product is packaged in cardboard boxes, wrapped in plastic, and stacked on wooden pallets for distribution.

This product contains substances listed in the candidate list (date: **17.01.2023**) exceeding 0.1 percentage by mass: **no**.

This product contains other 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) Ordinance on Biocide Products No. 528/2012): **no**

### Reference service life

When properly installed as a commercial floor covering, TaskWorx® with EcoSolution Q100™ face fibre has a reference service life of 15 years. This carpet tile product comes with a 15-year warranty, subject only to installation and maintenance being carried out in accordance with the manufacturer's guidelines.

## LCA: Calculation rules

### Declared Unit

The declaration refers to the declared unit of 1 m<sup>2</sup> of installed carpet tile.

### Declared unit

| Name            | Value | Unit              |
|-----------------|-------|-------------------|
| Declared unit   | 1     | m <sup>2</sup>    |
| Grammage        | 4.292 | kg/m <sup>2</sup> |
| Layer thickness | 0.007 | m                 |

## System boundary

The type of EPD is **Cradle-to-Gate with options** modules C1–C4, module D, and additional modules. The additional modules are A4, A5, B1 and B2.

The modules considered in the life cycle assessment and environmental product declaration, based on the product's entire life cycle, are described as follows:

### Production Stage:

- Module A1 - Provision of Raw Materials.
- Module A2 - Transport of Raw Materials.
- Module A3 - Manufacturing.

### Construction/Installation Stage:

- Module A4 - Transportation by truck of the product to the construction site in Europe.
  - Module A5 - Installation of the carpet, treatment of cutting waste (landfill) and packaging waste (landfill, recycling, and incineration). The production of the amount of carpet that occurs as installation waste is also included along with its transport to the place of installation.
- Biogenic carbon that is stored in the wooden pallets and cardboard (packaging) is released as carbon dioxide emissions into the air at the end of life in module A5.

### Use Stage:

- Module B1 - Indoor emissions of volatile organic compounds (VOCs) during the first few months after installation.
- Module B2 - Carpet cleaning per year, including vacuuming (electricity consumption) and hot water cleaning (electricity and water consumption, as well as waste water treatment).
- Module B3 - Repair (module not relevant).
- Module B4 - Replacement (module not relevant).
- Module B5 - Refurbishment (module not relevant).
- Module B6 - Operational Energy Use (module not relevant).
- Module B7 - Operational Water Use (module not relevant).

## End-of-Life Stage:

Three scenarios have been evaluated:

Scenario 1: the TaskWorx® carpet is 100% disposed of in a landfill.

Scenario 2: the TaskWorx® carpet is 100% incinerated.

Scenario 3: 40% of TaskWorx® carpets are incinerated and the remaining 60% are landfilled. This assumption is based on the carpet disposal rates in Europe mentioned in the study conducted by Deutsche Umwelthilfe in 2017 (Umwelthilfe, 2017) and the European Commission in 2013 (Comission, 2013).

- Module C1 - The carpet is de-constructed manually and no additional environmental impact is caused.
- Module C2 - Transport of the carpet waste to a landfill or to the municipal waste incineration plant.
- Module C3 - Impacts from thermal treatment disposal (C3/2 and C3/3).
- Module C4 - Impacts from landfill disposal (C4/1 and C4/3).

**Module D** includes benefits from energy recovery via treatment of packaging materials and incineration of carpets at their end of life (D/1, D/2 and D/3), as well as the burdens of balancing the secondary material content in modules A1 and A3 via the net-scrap approach.

## 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. The used background database used for the creation of the EPD : *GaBi ts software*, CUP 2022.2.

## LCA: Scenarios and additional technical information

### Characteristic product properties of biogenic carbon

Biogenic carbon is only present in packaging (wooden pallets and cardboards). Assumed water content in wooden pallet (packaging): 18%.

### Information on describing the Biogenic Carbon Content at factory gate

| Name                                              | Value | Unit |
|---------------------------------------------------|-------|------|
| Biogenic carbon content in accompanying packaging | 0.14  | kg C |

The following technical scenario information is required for the declared modules and optional for non-declared modules.

### Transport to the construction site (A4)

| Name                                        | Value | Unit |
|---------------------------------------------|-------|------|
| Transport distance (truck)                  | 687   | km   |
| Capacity utilisation (including empty runs) | 55    | %    |

### Installation in the building (A5)

The installation of TaskWorx® is done manually and no energy is required. A Pressure-Sensitive adhesive is required for the

installation of TaskWorx® carpet tile and should be used in accordance with the manufacturer's guidelines. Installation losses have been accounted for in module A5. Product losses are considered as 5%.

The packaging material treatment and disposal are also considered in module A5 (landfill, recycling, and incineration) and the resulting benefits from energy generation are included in module D. The quantity of wooden pallets used is 0.133 kg per m². Wooden pallets are assumed to be re-used 20 times before being disposed of. Hence, the quantity of pallet disposed is 0.007 kg. The quantity of cardboard packaging is 0.21 kg/m² and the quantity of plastic packaging is 0.0103 kg/m². Total amount of packaging disposed at installation is 0.227 kg. Packaging disposal rates (Source: Eurostat, Recovery and recycling rates for packaging).

- Paper - 82.8% recycled; 9.4% landfilled; and 7.8% incinerated
- Plastic - 40.3% recycled; 28.7% landfilled; and 31.0% incinerated
- Wood pallets - 39.8% recycled; 34.5% landfilled; and 25.7% incinerated

| Name                                                                      | Value | Unit |
|---------------------------------------------------------------------------|-------|------|
| Auxiliary (adhesive)                                                      | 0.23  | kg   |
| Material loss (5% cutting losses)                                         | 0.215 | kg   |
| Output substances following waste treatment on site (packaging materials) | 0.227 | kg   |

## Use (B1) see cap. 2.12 use

| Name                                                             | Value | Unit  |
|------------------------------------------------------------------|-------|-------|
| Emissions to air (TVOC) after 50 days - Indoor Air Comfort Gold® | 900   | mg/m² |

Emission testing was conducted in accordance to Eurofins Indoor Air Comfort Gold® certification. After 28 days, the specific concentration of TVOCs was < 100 ug/m³, as required by the certification standard.

## Maintenance (B2)

For the maintenance of TaskWorx® Carpet Tile, 2 hot water extraction cleanings (water and electricity consumption) per year as well as 52 vacuum cleanings (electricity consumption) per year are recommended. The Reference Service Life of the product is 15 years. The results in the EPD declare a maintenance for the period of 1 year.

| Name                             | Value  | Unit |
|----------------------------------|--------|------|
| Water consumption (1 year)       | 0.0009 | m³   |
| Electricity consumption (1 year) | 0.772  | kWh  |

## Reference service life

| Name                                                             | Value | Unit |
|------------------------------------------------------------------|-------|------|
| Reference service life (according to ISO 15686-1, -2, -7 and -8) | 15    | a    |
| Life Span according to the manufacturer                          | 15    | a    |

## End of Life (C1-C4)

C1 - The product dismantling from the building is done manually without energy burden.

C2 - Transportation of the product to the end of life is assumed to be 161 km (100 miles).

C3/2: The TaskWorx carpet is 100% combusted in and incineration plant with energy recovery (R>0.6).

C3/3: It is assumed that 40% of TaskWorx carpets are incinerated and the remaining 60% are landfilled.

C4/1: The TaskWorx carpet product is 100% disposed of in a landfill.

C4/3: It is assumed that 40% of TaskWorx carpets are incinerated and the remaining 60% are landfilled.

| Name                                                                       | Value | Unit |
|----------------------------------------------------------------------------|-------|------|
| Collected as mixed construction waste                                      | 4.292 | kg   |
| Landfilling (Scenario 1 - C3/1, C4/1 and D/1)                              | 4.292 | kg   |
| Incineration (Scenario 2 - C3/2, C4/2, and D/2)                            | 4.292 | kg   |
| Landfilling (60%) and Incineration (40%) (Scenario 3 - C3/3, C4/3 and D/3) | 4.292 | kg   |

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

For the thermal and electrical energy generated in Module A5 due to thermal treatment of packaging, avoided burdens have been calculated by the inversion of electricity grid mix and thermal energy from natural gas, using European datasets.

Module D also includes the environmental burdens linked to the supply to secondary materials (nylon and calcium carbonate) used in the carpet production.

## LCA: Results

The B2 module declares the maintenance (cleaning) per one year. The user of the EPD will be able to scale the results for its entire useful life by multiplying the impact by the RSL.

Three end of life scenarios were considered in the EPD.

Scenario 1: TaskWorx carpet is 100% landfilled. (C3/1, C4/1 and D/1).

Scenario 2: TaskWorx carpet is 100% incinerated with energy recovery (R>0.6) (C3/2, C4/2 and D/2).

Scenario 3: 40% of TaskWorx carpets are incinerated and the remaining 60% are landfilled (C3/3, C4/3 and D/3).

**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        | X         | X           | MNR    | MNR         | MNR           | MND                    | MND                   | X                          | X         | X                | X        | X                                               |  |

## RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A2: 1 m² TaskWorx® Carpet

| Parameter      | Unit                  | A1-A3     | A4        | A5       | B1       | B2       | C1 | C2       | C3/1 | C3/2     | C3/3     | C4/1      | C4/2 | C4/3      | D/1      | D/2       | D/3      |
|----------------|-----------------------|-----------|-----------|----------|----------|----------|----|----------|------|----------|----------|-----------|------|-----------|----------|-----------|----------|
| GWP-total      | kg CO <sub>2</sub> eq | 3.46E+00  | 2.68E-01  | 2.85E-01 | 2.54E-04 | 2.89E-01 | 0  | 5.81E-02 | 0    | 4.75E+00 | 1.9E+00  | 3.01E-01  | 0    | 1.81E-01  | 5.22E+00 | 3.93E+00  | 4.71E+00 |
| GWP-fossil     | kg CO <sub>2</sub> eq | 3.8E+00   | 2.67E-01  | 2.44E-01 | 2.54E-04 | 2.86E-01 | 0  | 5.79E-02 | 0    | 4.74E+00 | 1.9E+00  | 3.04E-01  | 0    | 1.83E-01  | 5.2E+00  | 3.92E+00  | 4.69E+00 |
| GWP-biogenic   | kg CO <sub>2</sub> eq | -3.41E-01 | -3.68E-04 | 4.09E-02 | 0        | 3.05E-03 | 0  | -8E-05   | 0    | 2.64E-03 | 1.06E-03 | -3.24E-03 | 0    | -1.94E-03 | 2.13E-02 | 1.09E-02  | 1.71E-02 |
| GWP-luluc      | kg CO <sub>2</sub> eq | 1.87E-03  | 1.49E-03  | 1.91E-04 | 0        | 6.06E-05 | 0  | 3.23E-04 | 0    | 1.26E-04 | 5.05E-05 | 1.48E-04  | 0    | 8.89E-05  | 3.77E-04 | 1.36E-04  | 2.81E-04 |
| ODP            | kg CFC11 eq           | 8.28E-09  | 1.6E-14   | 4.36E-10 | 0        | 4.19E-12 | 0  | 3.47E-15 | 0    | 2.82E-12 | 1.13E-12 | 4.09E-13  | 0    | 2.45E-13  | 8.44E-12 | -7.96E-12 | 1.88E-12 |
| AP             | mol H <sup>+</sup> eq | 1.04E-02  | 2.75E-04  | 6.27E-04 | 0        | 6.29E-04 | 0  | 5.97E-05 | 0    | 1.83E-03 | 7.3E-04  | 9.02E-04  | 0    | 5.41E-04  | 9.61E-03 | 7.06E-03  | 8.59E-03 |
| EP-freshwater  | kg P eq               | 2.15E-05  | 7.96E-07  | 4.38E-06 | 0        | 1.4E-06  | 0  | 1.73E-07 | 0    | 8.8E-07  | 3.52E-07 | 5.68E-05  | 0    | 3.41E-05  | 4.26E-06 | 9.85E-07  | 2.95E-06 |
| EP-marine      | kg N eq               | 2.48E-03  | 8.99E-05  | 1.55E-04 | 0        | 1.43E-04 | 0  | 1.95E-05 | 0    | 6.2E-04  | 2.48E-04 | 1.99E-04  | 0    | 1.2E-04   | 2.71E-03 | 2.12E-03  | 2.47E-03 |
| EP-terrestrial | mol N eq              | 2.68E-02  | 1.07E-03  | 1.66E-03 | 0        | 1.48E-03 | 0  | 2.32E-04 | 0    | 8.58E-03 | 3.43E-03 | 2.19E-03  | 0    | 1.31E-03  | 2.33E-02 | 1.71E-02  | 2.08E-02 |
| POCP           | kg NMVOC eq           | 8.21E-03  | 2.42E-04  | 5.06E-04 | 1.41E-05 | 3.82E-04 | 0  | 5.26E-05 | 0    | 1.64E-03 | 6.55E-04 | 6.42E-04  | 0    | 3.85E-04  | 8.74E-03 | 7.13E-03  | 8.1E-03  |
| ADPE           | kg Sb eq              | 5.9E-07   | 2.23E-08  | 3.38E-08 | 0        | 7.8E-08  | 0  | 4.84E-09 | 0    | 4.59E-08 | 1.84E-08 | 2.11E-08  | 0    | 1.27E-08  | 5.42E-07 | 2.29E-07  | 4.17E-07 |
| ADPF           | MJ                    | 9.52E+01  | 3.56E+00  | 5.49E+00 | 0        | 5.19E+00 | 0  | 7.74E-01 | 0    | 4.88E+00 | 1.95E+00 | 4.32E+00  | 0    | 2.59E+00  | 1.05E+02 | 8.17E+01  | 9.55E+01 |
| WDP            | m³ world eq deprived  | 4.24E-01  | 2.39E-03  | 2.66E-02 | 0        | 6.54E-02 | 0  | 5.19E-04 | 0    | 7.64E-01 | 3.06E-01 | -3E-03    | 0    | -1.8E-03  | 2.06E-01 | -5.04E-02 | 1.03E-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: 1 m² TaskWorx® Carpet

| Parameter | Unit | A1-A3    | A4       | A5        | B1 | B2       | C1 | C2       | C3/1 | C3/2     | C3/3      | C4/1     | C4/2 | C4/3     | D/1      | D/2       | D/3       |
|-----------|------|----------|----------|-----------|----|----------|----|----------|------|----------|-----------|----------|------|----------|----------|-----------|-----------|
| PERE      | MJ   | 1.13E+01 | 2.13E-01 | 4.22E+00  | 0  | 2.88E+00 | 0  | 4.4E-02  | 0    | 1.81E+00 | 7.22E-01  | 3.55E-01 | 0    | 2.13E-01 | 4.1E+00  | -7.19E+00 | -4.15E-01 |
| PERM      | MJ   | 5.31E+00 | 0        | -4.19E+00 | 0  | 0        | 0  | 0        | 0    | 0        | 0         | 0        | 0    | 0        | 0        | 0         | 0         |
| PERT      | MJ   | 1.66E+01 | 2.13E-01 | 3.01E-02  | 0  | 2.88E+00 | 0  | 4.4E-02  | 0    | 1.81E+00 | 7.22E-01  | 3.55E-01 | 0    | 2.13E-01 | 4.1E+00  | -7.19E+00 | -4.15E-01 |
| PENRE     | MJ   | 4.18E+01 | 3.76E+00 | 6.1E-01   | 0  | 5.19E+00 | 0  | 7.76E-01 | 0    | 6.29E+01 | 2.52E+01  | 4.32E+00 | 0    | 2.59E+00 | 1.05E+02 | 8.18E+01  | 9.56E+01  |
| PENRM     | MJ   | 5.84E+01 | 0        | -3.17E-01 | 0  | 0        | 0  | 0        | 0    | -5.8E+01 | -2.32E+01 | 0        | 0    | 0        | 0        | 0         | 0         |
| PENRT     | MJ   | 9.87E+01 | 3.76E+00 | 2.94E-01  | 0  | 5.19E+00 | 0  | 7.76E-01 | 0    | 4.89E+00 | 1.95E+00  | 4.32E+00 | 0    | 2.59E+00 | 1.05E+02 | 8.18E+01  | 9.56E+01  |

|      |    |          |          |          |   |          |   |          |   |          |          |          |   |          |           |           |           |
|------|----|----------|----------|----------|---|----------|---|----------|---|----------|----------|----------|---|----------|-----------|-----------|-----------|
| SM   | kg | 3.03E+00 | 0        | 1.6E-01  | 0 | 0        | 0 | 0        | 0 | 0        | 0        | 0        | 0 | 0        | -3.19E+00 | -3.19E+00 | -3.19E+00 |
| RSF  | MJ | 0        | 0        | 0        | 0 | 0        | 0 | 0        | 0 | 0        | 0        | 0        | 0 | 0        | 0         | 0         | 0         |
| NRSF | MJ | 0        | 0        | 0        | 0 | 0        | 0 | 0        | 0 | 0        | 0        | 0        | 0 | 0        | 0         | 0         | 0         |
| FW   | m³ | 1.84E-02 | 2.29E-04 | 1.09E-03 | 0 | 2.75E-03 | 0 | 4.98E-05 | 0 | 1.77E-02 | 7.09E-03 | 5.59E-05 | 0 | 3.35E-05 | 1.05E-02  | -3.02E-04 | 6.17E-03  |

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:

### 1 m² TaskWorx® Carpet

| Parameter | Unit | A1-A3    | A4       | A5       | B1 | B2       | C1 | C2       | C3/1 | C3/2     | C3/3     | C4/1     | C4/2 | C4/3     | D/1      | D/2       | D/3       |
|-----------|------|----------|----------|----------|----|----------|----|----------|------|----------|----------|----------|------|----------|----------|-----------|-----------|
| HWD       | kg   | 8.38E-07 | 1.71E-11 | 4.41E-08 | 0  | 4.49E-10 | 0  | 3.72E-12 | 0    | 4.64E-10 | 1.86E-10 | 6.66E-10 | 0    | 3.99E-10 | 9.43E-09 | 7.18E-09  | 8.53E-09  |
| NHWD      | kg   | 3.96E-01 | 5.12E-04 | 2.66E-01 | 0  | 4.77E-03 | 0  | 1.11E-04 | 0    | 4.22E-01 | 1.69E-01 | 4.27E+00 | 0    | 2.56E+00 | 5.44E-03 | -1.06E-02 | -9.59E-04 |
| RWD       | kg   | 3.96E-03 | 4.4E-06  | 2.14E-04 | 0  | 8.3E-04  | 0  | 9.56E-07 | 0    | 3.21E-04 | 1.29E-04 | 5.3E-05  | 0    | 3.18E-05 | 7.04E-04 | -2.55E-03 | -5.96E-04 |
| CRU       | kg   | 0        | 0        | 0        | 0  | 0        | 0  | 0        | 0    | 0        | 0        | 0        | 0    | 0        | 0        | 0         | 0         |
| MFR       | kg   | 0        | 0        | 1.81E-01 | 0  | 0        | 0  | 0        | 0    | 0        | 0        | 0        | 0    | 0        | 0        | 0         | 0         |
| MER       | kg   | 0        | 0        | 0        | 0  | 0        | 0  | 0        | 0    | 0        | 0        | 0        | 0    | 0        | 0        | 0         | 0         |
| EEE       | MJ   | 0        | 0        | 6.37E-02 | 0  | 0        | 0  | 0        | 0    | 1.09E+01 | 4.37E+00 | 0        | 0    | 0        | 0        | 0         | 0         |
| EET       | MJ   | 0        | 0        | 9.77E-02 | 0  | 0        | 0  | 0        | 0    | 2.35E+00 | 9.39E-01 | 0        | 0    | 0        | 0        | 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:

### 1 m² TaskWorx® Carpet

| Parameter | Unit              | A1-A3    | A4       | A5       | B1       | B2       | C1 | C2       | C3/1 | C3/2     | C3/3     | C4/1     | C4/2 | C4/3     | D/1      | D/2       | D/3       |
|-----------|-------------------|----------|----------|----------|----------|----------|----|----------|------|----------|----------|----------|------|----------|----------|-----------|-----------|
| PM        | Disease incidence | 1.21E-07 | 1.59E-09 | 7.08E-09 | 0        | 5.21E-09 | 0  | 3.45E-10 | 0    | 2.36E-08 | 9.42E-09 | 8.66E-09 | 0    | 5.2E-09  | 7.58E-08 | 5.46E-08  | 6.73E-08  |
| IR        | kBq U235 eq       | 4.18E-01 | 6.45E-04 | 2.29E-02 | 0        | 1.41E-01 | 0  | 1.4E-04  | 0    | 3.3E-02  | 1.32E-02 | 7.83E-03 | 0    | 4.7E-03  | 1.09E-01 | -4.41E-01 | -1.11E-01 |
| ETP-fw    | CTUe              | 5.7E+01  | 2.47E+00 | 3.4E+00  | 5.17E-04 | 2.35E+00 | 0  | 5.37E-01 | 0    | 2.1E+00  | 8.4E-01  | 4.22E+00 | 0    | 2.53E+00 | 4.9E+01  | 4E+01     | 4.54E+01  |
| HTP-c     | CTUh              | 1.58E-09 | 4.99E-11 | 9.76E-11 | 0        | 6.79E-11 | 0  | 1.08E-11 | 0    | 8.3E-11  | 3.32E-11 | 1.9E-10  | 0    | 1.14E-10 | 1.39E-09 | 1.11E-09  | 1.28E-09  |
| HTP-nc    | CTUh              | 9.46E-08 | 2.59E-09 | 6.12E-09 | 3.73E-12 | 2.65E-09 | 0  | 5.62E-10 | 0    | 4.76E-09 | 1.91E-09 | 1.59E-09 | 0    | 9.54E-09 | 5.27E-08 | 4.25E-08  | 4.86E-08  |
| SQP       | SQP               | 1.22E+01 | 1.23E+00 | 7.38E-01 | 0        | 1.87E+00 | 0  | 2.66E-01 | 0    | 1.47E+00 | 5.86E-01 | 3.11E-01 | 0    | 1.86E-01 | 2.43E+00 | -4.91E+00 | -5.06E-01 |

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 (carcinogenic); HTP-nc = Potential comparative Toxic Unit for humans (not carcinogenic); 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 nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from 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 – carcinogenic', 'Potential comparative toxic unit for humans - not carcinogenic', 'potential soil quality index'. The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator. This EPD was created using a software tool.

## References

### STANDARDS:

#### EN 10874

EN 10874:2009, Resilient, textile and laminate floor coverings — Classification.

#### EN 1307

EN 1307:2014, Textile floor coverings — Classification.

#### EN 14041

EN 14041:2004/AC:2006 — Resilient, textile and laminate floor coverings — Essential characteristics.

#### 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.

#### ISO 14025

ISO 14025:2011, Environmental labels and declarations —

Type III environmental declarations — Principles and procedures.

## **ISO 14040**

ISO 14040:2006, Environmental management — Life cycle assessment — Principles and framework.

## **ISO 14044**

ISO 14044:2006, Environmental management — Life cycle assessment — Requirements and guidelines.

## **ISO 15686**

ISO 15686-1:2011, Building and constructed assets — Service life planning — Part 1: General principles and framework.

## **ISO 15686**

ISO 15686-2:2011, Building and constructed assets — Service life planning — Part 2: Service life prediction procedures.

## **ISO 15686**

ISO 15686-7:2011, Building and constructed assets — Service life planning — Part 7: Performance evaluation for feedback of service life data from practice.

## **ISO 15686**

ISO 15686-8:2011, Building and constructed assets — Service life planning — Part 8: Reference service life and service life estimation.

## **FURTHER REFERENCES:**

### **Candidate list**

Candidate List of substances of very high concern for Authorisation, published on ECHA website, latest version 17.01.2023 (<https://echa.europa.eu/candidatelist-table>).

### **Deutsche Umwelthilfe**

Deutsche Umwelthilfe. Swept under the Carpet: The Big Waste

Problem of the Carpet Industry in Germany, 2017.

## **GaBi**

GaBi Software System and Database for Life Cycle Engineering, 1992-2021, Sphera Solutions GmbH, Leinfelden-Echterdingen, with acknowledgement of LBP University of Stuttgart, program version GaBi 10; database version 2021.1.

## **GaBi documentation**

GaBi dataset documentation for the software system and databases, LBP, University of Stuttgart and Sphera Solutions GmbH, Leinfelden-Echterdingen, 2021 (<http://www.gabi-software.com/support/gabi/gabi-database-2021-lci-documentation/>).

## **IBU 2021**

Institut Bauen und Umwelt e.V.: General Instructions for the EPD programme of Institut Bauen und Umwelt e.V., Version 2.0, Berlin: Institut Bauen und Umwelt e.V., 2021 ([www.ibu-epd.com](http://www.ibu-epd.com)).

## **PCR Part A**

PCR Part A: Calculation rules for the Life Cycle Assessment and Requirements on the Background Report according to EN 15804:2012+A2:2019/AC:2021, Version 1.3, Institut Bauen und Umwelt e.V., 2021.

## **PCR Part B**

Product Category Rules for Building Products, Part B: Requirements on the EPD for floor coverings, version 1.7, 2022 ([www.bau-umwelt.de](http://www.bau-umwelt.de)).

## **Packaging disposal rates**

Eurostat, Recovery and recycling rates for packaging. 2015 (<http://ec.europa.eu/eurostat/web/environment/waste/main-tables>).



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## Annex

# For TaskWorx® Carpet Tile with EcoSolution Q100™ Face Fibre

## Shaw Contract (Shaw Europe Ltd.)

to the

### ENVIRONMENTAL PRODUCT DECLARATION

as per ISO 14025 and EN 15804+A2

|                          |                                  |
|--------------------------|----------------------------------|
| Owner of the Declaration | Shaw Contract (Shaw Europe Ltd.) |
| Declaration number       | EPD-SHA-20220301-CCA1-EN         |
| Issue date               | 19/09/2023                       |
| Valid to                 | 18/09/2028                       |

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



## General Information

Shaw Contract (Shaw Europe Ltd.)

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**Programme holder**

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

---

**Declaration number**

EPD-SHA20220301-CCA1-EN

---

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

Floor coverings, 01/08/2021  
(PCR checked and approved by the SVR)

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**Issue date**

19/09/2023

---

**Valid to**

18/09/2028



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



Florian Pronold  
(Managing Director Institut Bauen und Umwelt e.V.)

TaskWorx® Carpet Tile with  
EcoSolution Q100™ Face Fibre

---

**Owner of the declaration**

Shaw Contract (Shaw Europe Ltd.)  
Blackaddie Road  
DG46DB Sanquhar  
United Kingdom

---

**Declared product / declared unit**

1 m<sup>2</sup> of installed TaskWorx® Carpet Tile

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**Scope:**

A Life Cycle Assessment (LCA) was conducted based upon production data collected from Shaw Contract (Shaw Europe Ltd.), Plant SQ manufacturing facility (Blackaddie Road, Sanquhar, DG46DB), located in Scotland, UK. Production data was collected for TaskWorx® Carpet Tile with EcoSolution Q100™ Face Fibre, for the period of one year, from January to December 2021.

The associated EPD is cradle-to-gate with options in scope with additional modules A4, A5, B1, and B2. The associated EPD is created in accordance to the specifications of *EN 15804+A2*.

This Annex contains the Global Warming Potential results [kg CO<sub>2</sub>-eq.] for additional product face fibre weights.

The functional unit has been defined as 1 m<sup>2</sup> of installed TaskWorx® Carpet Tile.

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*

☐ internally ☒ externally



Kim Allbury  
(Independent verifier)

## LCA: Calculation rules

This Annex contains the Global Warming Potential results [kg CO<sub>2</sub>-eq.] for additional product face fibre weights.

## LCA: GWP-total [kg CO<sub>2</sub>-eq.] Results for Additional Face Fibre

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        | X         | X           | MNR    | MNR         | MNR           | ND                     | ND                    | X                          | X         | X                | X        | X                                               |

| Face Fibre            | Unit                     | A1-A3    | A4       | A5       | B1       | B2       | C2       | C3       | C4       | D        |
|-----------------------|--------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 450 g/m <sup>2</sup>  | [kg CO <sub>2</sub> eq.] | 3.63E+00 | 6.86E-02 | 9.64E-02 | 0.00E+00 | 4.68E+00 | 5.50E-02 | 3.89E-01 | 1.12E-01 | 2.05E+00 |
| 500 g/m <sup>2</sup>  | [kg CO <sub>2</sub> eq.] | 3.70E+00 | 6.95E-02 | 9.64E-02 | 0.00E+00 | 4.68E+00 | 5.57E-02 | 3.94E-01 | 1.13E-01 | 2.08E+00 |
| 550 g/m <sup>2</sup>  | [kg CO <sub>2</sub> eq.] | 3.78E+00 | 7.03E-02 | 9.64E-02 | 0.00E+00 | 4.68E+00 | 5.64E-02 | 3.99E-01 | 1.14E-01 | 2.10E+00 |
| 576 g/m <sup>2</sup>  | [kg CO <sub>2</sub> eq.] | 3.81E+00 | 7.08E-02 | 9.64E-02 | 0.00E+00 | 4.68E+00 | 5.67E-02 | 4.02E-01 | 1.15E-01 | 2.11E+00 |
| 600 g/m <sup>2</sup>  | [kg CO <sub>2</sub> eq.] | 3.85E+00 | 7.12E-02 | 9.64E-02 | 0.00E+00 | 4.68E+00 | 5.70E-02 | 4.04E-01 | 1.16E-01 | 2.13E+00 |
| 650 g/m <sup>2</sup>  | [kg CO <sub>2</sub> eq.] | 3.92E+00 | 7.20E-02 | 9.64E-02 | 0.00E+00 | 4.68E+00 | 5.77E-02 | 4.09E-01 | 1.17E-01 | 2.15E+00 |
| 682 g/m <sup>2</sup>  | [kg CO <sub>2</sub> eq.] | 3.97E+00 | 7.25E-02 | 9.64E-02 | 0.00E+00 | 4.68E+00 | 5.82E-02 | 4.12E-01 | 1.18E-01 | 2.17E+00 |
| 700 g/m <sup>2</sup>  | [kg CO <sub>2</sub> eq.] | 4.00E+00 | 7.29E-02 | 9.64E-02 | 0.00E+00 | 4.68E+00 | 5.84E-02 | 4.13E-01 | 1.18E-01 | 2.18E+00 |
| 746 g/m <sup>2</sup>  | [kg CO <sub>2</sub> eq.] | 4.07E+00 | 7.36E-02 | 9.64E-02 | 0.00E+00 | 4.68E+00 | 5.90E-02 | 4.18E-01 | 1.20E-01 | 2.20E+00 |
| 750 g/m <sup>2</sup>  | [kg CO <sub>2</sub> eq.] | 4.07E+00 | 7.37E-02 | 9.64E-02 | 0.00E+00 | 4.68E+00 | 5.91E-02 | 4.18E-01 | 1.20E-01 | 2.20E+00 |
| 800 g/m <sup>2</sup>  | [kg CO <sub>2</sub> eq.] | 4.15E+00 | 7.45E-02 | 9.64E-02 | 0.00E+00 | 4.68E+00 | 5.98E-02 | 4.23E-01 | 1.21E-01 | 2.23E+00 |
| 814 g/m <sup>2</sup>  | [kg CO <sub>2</sub> eq.] | 4.17E+00 | 7.48E-02 | 9.64E-02 | 0.00E+00 | 4.68E+00 | 5.99E-02 | 4.24E-01 | 1.22E-01 | 2.24E+00 |
| 850 g/m <sup>2</sup>  | [kg CO <sub>2</sub> eq.] | 4.22E+00 | 7.54E-02 | 9.64E-02 | 0.00E+00 | 4.68E+00 | 6.04E-02 | 4.28E-01 | 1.23E-01 | 2.25E+00 |
| 881 g/m <sup>2</sup>  | [kg CO <sub>2</sub> eq.] | 4.27E+00 | 7.59E-02 | 9.64E-02 | 0.00E+00 | 4.68E+00 | 6.09E-02 | 4.31E-01 | 1.23E-01 | 2.27E+00 |
| 900 g/m <sup>2</sup>  | [kg CO <sub>2</sub> eq.] | 4.29E+00 | 7.62E-02 | 9.64E-02 | 0.00E+00 | 4.68E+00 | 6.11E-02 | 4.33E-01 | 1.24E-01 | 2.28E+00 |
| 949 g/m <sup>2</sup>  | [kg CO <sub>2</sub> eq.] | 4.37E+00 | 7.71E-02 | 9.64E-02 | 0.00E+00 | 4.68E+00 | 6.18E-02 | 4.37E-01 | 1.25E-01 | 2.30E+00 |
| 950 g/m <sup>2</sup>  | [kg CO <sub>2</sub> eq.] | 4.37E+00 | 7.71E-02 | 9.64E-02 | 0.00E+00 | 4.68E+00 | 6.18E-02 | 4.37E-01 | 1.25E-01 | 2.30E+00 |
| 1000 g/m <sup>2</sup> | [kg CO <sub>2</sub> eq.] | 4.44E+00 | 7.79E-02 | 9.64E-02 | 0.00E+00 | 4.68E+00 | 6.25E-02 | 4.42E-01 | 1.27E-01 | 2.33E+00 |


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