



EcoLeaf

Type III Environmental Declaration (EPD)

Registration number : JR-AN-22007E

Japan EPD Program by SuMPO

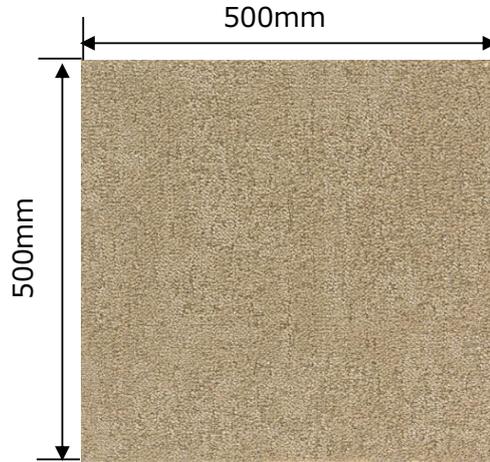
Sustainable Management Promotion Organization

14-8, Uchikanda 1-chome, Chiyoda-ku, Tokyo Japan

<https://ecoleaf-label.jp/>

KAWASHIMA SELKON TEXTILES CO.,LTD.

Tile Carpet ART BANK-7



TRANSLATION II

### Functional unit

per piece

### System boundary

- final products
- intermediate products

Manufacturing Stage, Construction Stage,  
and Disposal/Recycling Stage

### Main specifications of the product

Product Name	Tile Carpet ART BANK-7
Product Model	TRANSLATION II
Product Weight	1.28±0.2kg per piece
Total Thickness	8.0±0.5mm
Size	500mm×500mm
Materials	Pile: Nylon(Econyl) Backing: Recycled PVC Refine-Sheet Primary Backing: Polyester
Company	KAWASHIMA SELKON TEXTILES CO.,LTD.
Main Manufacturing Site	Japan Carpet Co., Ltd.
Estimated Usage Period	About 7years(dependent on usage conditions)

### Company Information

Floor Covering Development Group

Products Development Dept.

TEL 06-6369-6088 FAX 06-6369-6228

Registration#	JR-AN-22007E
PCR number	PA-821000-AN-02
PCR name	Tile Carpet
Publication date	4/18/2022
Verification date	4/6/2022
Verification method	Product-by-product
Verification#	JV-AN-22007
Expiration date	4/5/2027

### PCR review was conducted by:

Approval date	10/1/2019
PCR review panel chair	Masayuki KANZAKI (Japan Environmental Management Association for Industry)

### Third party verifier\*

Yuuki SAKAMOTO

Independent verification of data & declaration in  
accordance with ISO14025

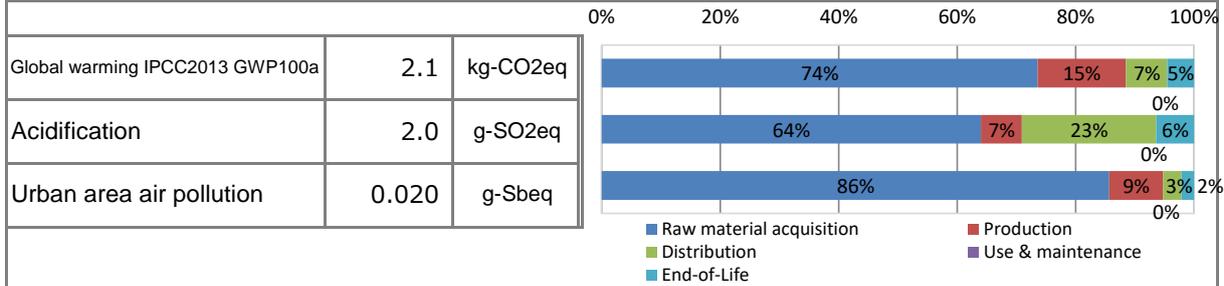
- internal
- external

\*Auditor's name is stated if system certification has been performed.

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**1. Results of life cycle impact assessment (LCIA)**



Parameter	stage	Unit	Total	Raw material acquisition	Production	Distribution	Use & maintenance	End-of-Life
Global warming IPCC2013 GWP100a		kg-CO <sub>2</sub> eq	2.1E+00	1.6E+00	3.2E-01	1.5E-01	0.0E+00	9.7E-02
Ozone layer destruction		kg-CFC-11eq	1.6E-07	1.5E-07	6.1E-09	1.2E-12	0.0E+00	1.6E-10
Acidification		kg-SO <sub>2</sub> eq	2.0E-03	1.3E-03	1.4E-04	4.6E-04	0.0E+00	1.3E-04
Urban area air pollution		kg-SO <sub>2</sub> eq	1.2E-03	8.9E-04	6.9E-05	1.7E-04	0.0E+00	7.2E-05
Photochemical ozone		kg-C <sub>2</sub> H <sub>4</sub> eq	1.8E-05	1.0E-05	5.7E-06	8.7E-07	0.0E+00	1.0E-06
Toxic chemicals(cancer)		kg-C <sub>6</sub> H <sub>6</sub> eq	3.3E-06	1.9E-06	1.3E-06	4.8E-11	0.0E+00	1.3E-07
Toxic chemicals(chronic disease)		kg-C <sub>6</sub> H <sub>6</sub> eq	4.7E-07	2.6E-07	1.9E-07	7.1E-12	0.0E+00	1.9E-08
Aquatic toxicity		kg-C <sub>6</sub> H <sub>6</sub> eq	7.2E-04	4.0E-04	2.9E-04	1.1E-08	0.0E+00	2.9E-05
Biological toxicity		kg-C <sub>6</sub> H <sub>6</sub> eq	1.7E-02	9.8E-03	6.9E-03	2.6E-07	0.0E+00	7.1E-04
Eutrophication		kg-PO <sub>4</sub> <sup>3-</sup> eq	2.8E-05	2.7E-07	2.1E-05	1.0E-15	0.0E+00	5.9E-06
Land use(Occupation)		m <sup>2</sup> /year	6.2E-01	5.8E-01	2.2E-02	1.2E-02	0.0E+00	2.0E-03
Land use(Transformation)		m <sup>2</sup>	1.1E-03	8.1E-04	3.2E-05	2.4E-04	0.0E+00	3.9E-05
Resources consumption		kg-Sbeq	2.0E-05	1.7E-05	1.8E-06	6.2E-07	0.0E+00	4.2E-07

**2. Life cycle inventory analysis (LCI)**

Parameter	Unit
Non-renewable material resources	4.8E-01 kg
Non-renewable energy resources	8.0E-01 kg
Non-renewable energy resources	3.4E+01 MJ
Renewable material resources	1.4E+00 kg
Renewable primary energy	7.6E+00 MJ
Consumption of freshwater	6.0E-03 m <sup>3</sup>
CO <sub>2</sub> emission; from fossil resources, atmosphere, unspecified	2.0E+00 kg
Energy resources, crude oil, 44.7(MJ)/kg, land area, and non-renewable energy resources	4.7E-01 kg
Emission, volatile organic compounds, atmosphere, unspecified	1.5E-10 kg

**3. Material composition**

Material	Unit	Unit
Recycled nylon(econyl)	12	%
Primary Backing(polyester)	2	%
Polyvinyl chloride	8	%
Plasticizer	7	%
Calcium Carbonate	30	%
Quicklime	0	%
Non-Woven Glass Fiber	1	%
Recycled PVC	37	%
Packaging Material	3	%

**4. Waste to disposal**

Parameter	Unit
Hazardous waste	— kg
Non-hazardous waste	1.1E+00 kg

\*Data derived from LCA and not assigned to the impact categories of LCIA



5. Additional explanation

- The transportation scenario was calculated according to PCR.
  - The use phase was not included in the calculation.
  - Direct effect on reduction of greenhouse gases (CO<sub>2</sub>, etc):
- |  |         |                       |
|--|---------|-----------------------|
|  | 72%     |                       |
| ① Direct effect of the tile carpet ART BANK-7  | 2.1E+00 | kg-CO <sub>2</sub> eq |
| ② Direct effect of the tile carpet (pattern: Milano Tweed) made of virgin plastic material | 7.9E+00 | kg-CO <sub>2</sub> eq |

※Registration number (2): JR-AN-21015E

※This product and the comparative product, the tile carpet made of virgin plastic (pattern: Milano Tweed), are different models, but although the amount of each component such as pile weight is slightly different, they were selected for comparison because they are all interior finishing materials with the same carpet tile function, have the same structure, and are shipped in large volumes in the product lineup.

Parameter	stage	Unit	Total①	Total②
Global warming IPCC2013 GWP100a		kg-CO <sub>2</sub> eq	2.1E+00	7.9E+00
Ozone layer destruction		kg-CFC-11eq	1.6E-07	3.6E-07
Acidification		kg-SO <sub>2</sub> eq	2.0E-03	4.5E-03
Urban area air pollution		kg-SO <sub>2</sub> eq	1.2E-03	3.1E-03
Photochemical ozone		kg-C <sub>2</sub> H <sub>4</sub> eq	1.8E-05	2.8E-05
Toxic chemicals(cancer)		kg-C <sub>6</sub> H <sub>6</sub> eq	3.3E-06	4.0E-06
Toxic chemicals(chronic disease)		kg-C <sub>6</sub> H <sub>6</sub> eq	4.7E-07	5.6E-07
Aquatic toxicity		kg-C <sub>6</sub> H <sub>6</sub> eq	7.2E-04	8.6E-04
Biological toxicity		kg-C <sub>6</sub> H <sub>6</sub> eq	1.7E-02	2.1E-02
Eutrophication		kg-PO <sub>4</sub> <sup>3-</sup> eq	2.8E-05	7.8E-06
Land use(Occupation)		m <sup>2</sup> /year	6.2E-01	6.0E-02
Land use(Transformation)		m <sup>2</sup>	1.1E-03	1.9E-03
Resources consumption		kg-Sbeq	2.0E-05	4.2E-05

■ This product uses ECONYL®, a recycled nylon, for surface piles and recycled PVC, a recycled backing, for the backing, making it possible to manufacture the product with reduced greenhouse gas emissions (CO<sub>2</sub>, etc). The reduction in greenhouse gas emissions (CO<sub>2</sub>, etc.) when compared to tile carpet made of virgin plastic material ((2), piles: nylon 6,6, backing: virgin PVC/registration number: JR-AN-21015E) was calculated based on this feature.

■ The direct effect was calculated as environmental load throughout the life cycle of each product (manufacturing, construction, and disposal/recycling stages).

- Indirect effect on reduction of greenhouse gases (CO<sub>2</sub>, etc):
- |   |          |                       |
|---|----------|-----------------------|
| · Life cycle stages of the tile carpet ART BANK-7 (direct effect)   | 2.1E+00  | kg-CO <sub>2</sub> eq |
| · Life cycle stages of the tile carpet ART BANK-7 (indirect effect) | -7.5E-01 | kg-CO <sub>2</sub> eq |

Parameter	stage	Unit	Direct effect	Indirect effect
Global warming IPCC2013 GWP100a		kg-CO <sub>2</sub> eq	2.1E+00	-7.5E-01
Ozone layer destruction		kg-CFC-11eq	1.6E-07	-1.6E-07
Acidification		kg-SO <sub>2</sub> eq	2.0E-03	-8.1E-04
Urban area air pollution		kg-SO <sub>2</sub> eq	1.2E-03	-6.0E-04
Photochemical ozone		kg-C <sub>2</sub> H <sub>4</sub> eq	1.8E-05	-4.2E-06
Toxic chemicals(cancer)		kg-C <sub>6</sub> H <sub>6</sub> eq	3.3E-06	-7.9E-07
Toxic chemicals(chronic disease)		kg-C <sub>6</sub> H <sub>6</sub> eq	4.7E-07	-1.1E-07
Aquatic toxicity		kg-C <sub>6</sub> H <sub>6</sub> eq	7.2E-04	-1.7E-04
Biological toxicity		kg-C <sub>6</sub> H <sub>6</sub> eq	1.7E-02	-4.2E-03
Eutrophication		kg-PO <sub>4</sub> <sup>3-</sup> eq	2.8E-05	-3.7E-06
Land use(Occupation)		m <sup>2</sup> /year	6.2E-01	-3.7E-03
Land use(Transformation)		m <sup>2</sup>	1.1E-03	-1.2E-04
Resources consumption		kg-Sbeq	2.0E-05	-1.4E-05

■ The indirect effect was calculated considering the effect of avoiding industrial waste disposal (reclamation) by using recycled nylon ECONYL® for piles and backing from used carpet tiles recycled through a recycling system for the backing, as well as the effect of avoiding the environmental load of raw materials used in the manufacture of new products. The recycled backing is used as backing for new tile carpet, and the pile part is recycled as an additive (forming inhibitor) for steel manufacturing.



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**6-1. Supplementary environmental information**

- Eco Mark certified product (certification number: 13 123 001)
- Green Purchasing Law compliant product

**6-2. Regulated hazardous substances**

Substance	CAS No.	Reference to standards or regulations
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**7. Assumptions of secondary data used**

Uses ECONYL® (recycled nylon) from IDEA v2.1.3 and EcoLeaf Environmental Label Program registration data v1.10.

**8. Remarks**

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- For data quantification, please refer to PCR and Rules on quantification and declaration.
- Comparative assertion is permitted only when Rules on quantification and declaration are satisfied.  
(Reference URL : <https://ecoleaf-label.jp/regulation/>)

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