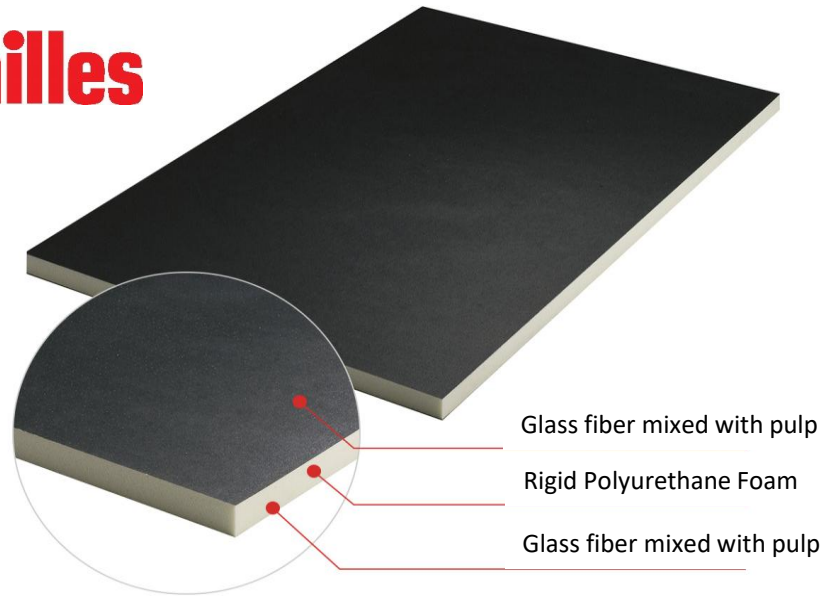
Japan EPD Program by SuMPO
Sustainable Management Promotion Organization
14-8, Uchikanda 1-chome, Chiyoda-ku, Tokyo Japan
https://ecoleaf-label.jp/

ACHILLES CORPORATION

Achilles Board GF non-fluorocarbon(high-density)



Functional unit

Per 1kg of Product

System boundary

☐ final products ■intermediate products

Scope:

Manufacturing Stage

A1:Raw Material Product A2:Transportation to Factory A3:Production

Exclusions :

Construction Stage, Usage Stage, Disposal and Recycling Stage

Main specifications of the product

Type: Rigid Polyurethane Foam Insulation Material

Product Weight: 1.0–4.0 kg/m²

Main Manufacturing Site: Ashikaga Plant2

Company Information

Achilles Corporation

2-21-1Kita-Shinjuku Shinjuku,Tokyo Japan

TEL +81 3 5338 9544

https://www.achilles-dannetu.jp/

Registration#	JR-BP-25001E
PCR number	PA-240000-BP-01
PCR name	Building and construction materials
Publication date	1-Sep-2025
Verification date	5-Aug-2025
Verification method	Product-by-product
Verification#	JV-BP-25001
Expiration date	4-Aug-2030

PCR review was conducted by:

Approval date	7-Nov-2023
PCR review panel chair	Masayuki Kanzaki Affiliation:Sustainable Management Promotion Organization

Third party verifier*

Takahiro Atoh

Independent verification of data & declaration in accordance with ISO14025

☐internal ■external

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

SuMPO EPD
Type III Environmental Declaration (EPD)
Registration number : JR-BP-25001E

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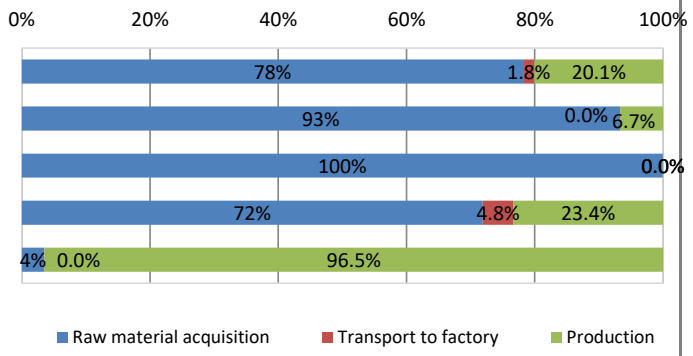
1. Results of life cycle impact assessment (LCIA)

Global warming IPCC2013 GWP100a	3.9	kg-CO_2eq
Ozone layer destruction	1.1E-06	kg-CFC-11eq
Eutrophication	2.8E-03	kg-PO_4^{3}-eq
Acidification	4.2E-03	kg-SO_2eq
Photochemical oxidants	3.1E-03	kg-C_2H_4eq



Parameter \ stage	Unit	Total	Raw material acquisition	Transport to factory	Production	-	-
Global warming IPCC2013 GWP100a	kg-CO_2eq	3.9E+00	3.1E+00	6.9E-02	7.9E-01	-	-
Ozone layer destruction	kg-CFC-11eq	1.1E-06	1.1E-06	9.3E-13	7.7E-08	-	-
Acidification	kg-SO_2eq	4.2E-03	3.0E-03	2.0E-04	9.7E-04	-	-
Urban area air pollution	kg-SO_2eq	3.0E-03	2.2E-03	8.0E-05	7.7E-04	-	-
Photochemical oxidants	kg-C_2H_4eq	3.1E-03	1.1E-04	5.0E-07	3.0E-03	-	-
Hazardous chemicals (carcinogenic)	kg-C_6H_6eq	1.7E-03	1.6E-03	3.4E-07	2.3E-05	-	-
Hazardous chemicals (chronic)	kg-C_6H_6eq	1.1E-04	1.1E-04	2.2E-07	2.1E-06	-	-
Aquatic toxicity	kg-C_6H_6eq	8.0E-03	7.4E-03	1.1E-08	6.6E-04	-	-
Terrestrial ecotoxicity	kg-C_6H_6eq	2.6E-01	2.5E-01	1.8E-07	1.5E-02	-	-
Eutrophication	kg-PO_4^{3-}eq	2.8E-03	2.8E-03	7.1E-13	3.4E-07	-	-
Land use(Occupation)	m^2/year	1.4E-01	1.3E-01	8.0E-03	1.9E-03	-	-
Land use(Transformation)	m^2	3.6E-03	3.4E-03	1.6E-04	5.0E-05	-	-
Resources consumption	kg-Sbeq	3.7E-05	3.3E-05	2.9E-07	3.7E-06	-	-

2. Life cycle inventory analysis (LCI)

Parameter		Unit
Non-renewable resources	2.7E-01	kg
Renewable energy	5.2E+00	MJ
Non-renewable energy	7.6E+01	MJ
Renewable resources	1.3E+00	kg
Consumption of freshwater	1.0E-01	m^3
Emission, CO2 (fossil resource-based), air, unspecified	3.6E+00	kg
Resource, crude oil, 44.7 MJ/kg, terrestrial, non-renewable energy	1.1E+00	kg
Emission, volatile organic compounds, air, unspecified	1.8E-08	kg

3. Material composition

Material		Unit
Polymeric MDI	48	%
Surface Paper	14	%
Polyether polyol	12	%
Flame retardant	6.2	%
Blowing agent	5.2	%
Polyether polyol	5.0	%
Polyester polyol	3.7	%
Polyester polyol	3.7	%
Packing material	0.67	%
Foam stabilizer	0.25	%
Additives	0.17	%

4. Waste to disposal

Parameter		Unit
Hazardous waste	0.00E+00	kg
Non-hazardous waste.	6.73E-02	kg
Treated MSW for landfill	6.11E-02	kg
Treated industrial waste for landfill	6.19E-03	kg

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

5. Additional explanation

The distance from the point of origin to the destination was measured using map information, and the mode of transportation was confirmed with the point of origin. For this intermediate material, only the manufacturing stage was calculated.

6-1. Supplementary environmental information

This product is manufactured in a factory certified with ISO 14001.

6-2. Regulated hazardous substances

Substance	CAS No.	Reference to standards or regulations
Methylene bis(4,1-phenylene) diisocyanate	101-68-8	PRTR Low , Industrial Safety and Health Act

7. Assumptions of secondary data used

Using IDEA version 3.1.0

8. Remarks

- 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/)
- This is a selfdeclared translation of EPD that can be accessed at [https://ecoleaf-label.jp/epd/2393]
  and is published for convenience purposes. Only the original EPD is valid and binding between parties.