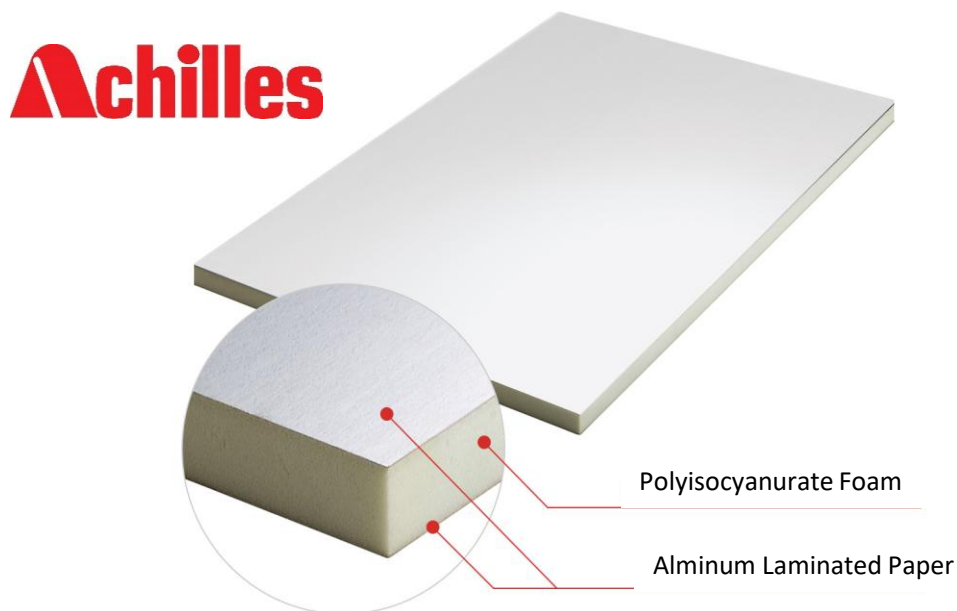


ACHILLES CORPORATION

Achilles Board WAL-D



Functional unit

Per 1 kg 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

2-21Kita-Shinjuku Shinjuku,Tokyo Japan

TEL +81 3 5338 9544

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

Registration#	JR-BP-25002E
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-25002
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*

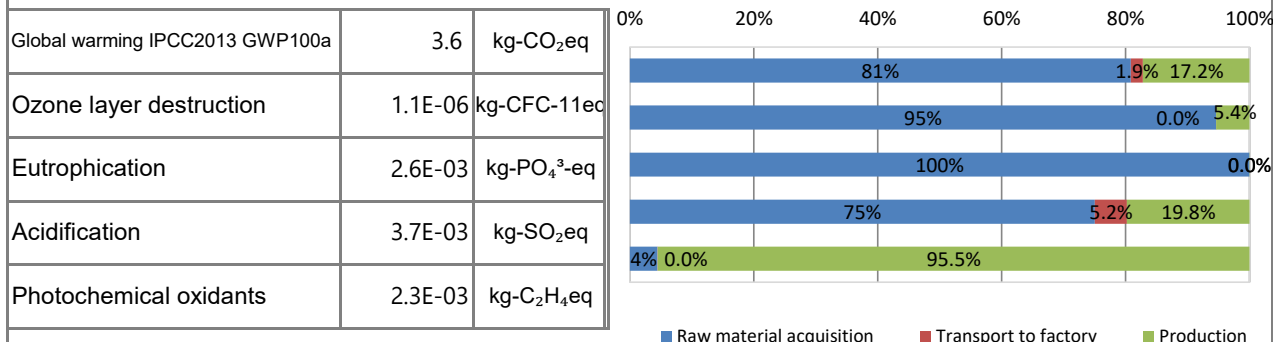
Takahiro Atoh

Independent verification of data & declaration in accordance with ISO14025

☐ internal ☒ external

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

1. Results of life cycle impact assessment (LCIA)



Parameter	stage	Unit	Total	Raw material acquisition	Transport to factory	Production	-	-
Global warming IPCC2013 GWP100a		kg-CO ₂ eq	3.6E+00	2.9E+00	6.9E-02	6.1E-01	-	-
Ozone layer destruction		kg-CFC-11eq	1.1E-06	1.0E-06	9.3E-13	5.8E-08	-	-
Acidification		kg-SO ₂ eq	3.7E-03	2.8E-03	1.9E-04	7.4E-04	-	-
Urban area air pollution		kg-SO ₂ eq	2.7E-03	2.0E-03	7.9E-05	5.8E-04	-	-
Photochemical oxidants		kg-C ₂ H ₄ eq	2.3E-03	1.0E-04	4.9E-07	2.2E-03	-	-
Hazardous chemicals (carcinogenic)		kg-C ₆ H ₆ eq	1.7E-03	1.6E-03	3.4E-07	2.0E-05	-	-
Hazardous chemicals (chronic)		kg-C ₆ H ₆ eq	1.1E-04	1.1E-04	2.2E-07	1.6E-06	-	-
Aquatic toxicity		kg-C ₆ H ₆ eq	8.2E-03	7.7E-03	1.1E-08	5.1E-04	-	-
Terrestrial ecotoxicity		kg-C ₆ H ₆ eq	2.4E-01	2.3E-01	1.8E-07	1.1E-02	-	-
Eutrophication		kg-PO ₄ ³⁻ eq	2.6E-03	2.6E-03	7.1E-13	3.2E-07	-	-
Land use(Occupation)		m ² /year	1.4E-01	1.3E-01	8.4E-03	1.5E-03	-	-
Land use(Transformation)		m ²	3.4E-03	3.2E-03	1.7E-04	3.9E-05	-	-
Resources consumption		kg-Sbeq	3.5E-05	3.2E-05	2.9E-07	2.8E-06	-	-

2. Life cycle inventory analysis (LCI)

Parameter	Value	Unit
Non-renewable resources	2.4E-01	kg
Renewable energy	4.6E+00	MJ
Non-renewable energy	1.8E+00	MJ
Renewable resources	1.2E+00	kg
Consumption of freshwater	9.9E-02	m ³
Emission, CO ₂ (fossil resource-based), air, unspecified	3.3E+00	kg
Resource, crude oil, 44.7 MJ/kg, terrestrial, non-renewable energy	9.5E-01	kg
Emission, volatile organic compounds, air, unspecified	1.6E-08	kg

4. Waste to disposal

Parameter	Value	Unit
Hazardous waste	0.00E+00	kg
Non-hazardous waste.	6.40E-02	kg
Treated MSW for landfill	5.79E-02	kg
Treated industrial waste for landfill	6.10E-03	kg

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

3. Material composition

Material	Value	Unit
Polyisocyanate PMPPI	42	%
Surface Paper	24	%
Polyether polyol	11	%
Polyester polyol	5.6	%
Flame retardant	5.1	%
Blowing agent	3.8	%
Packing material 1	2.1	%
Polyether polyol	1.9	%
Polyether polyol based additives	1.5	%
Ethylene Glycol	0.94	%
Foam stabilizer	0.28	%
Additives	0.21	%
Packing material 2	0.17	%
Additives	0.058	%
Additives	0.058	%

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.



SuMPO EPD
Type III Environmental Declaration (EPD)

Registration number : JR-BP-25002E

Japan EPD Program by SuMPO

Sustainable Management Promotion Organization
14-8, Uchikanda 1-chome, Chiyoda-ku, Tokyo Japan
<https://ecoleaf-label.jp/>

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/2394>]
and is published for convenience purposes. Only the original EPD is valid and binding between parties.

Registration number : JR-BP-25002E