



EcoLeaf

Type III Environmental Declaration (EPD)

Registration number : JR-BW-23001E

Japan EPD Program by SuMPO

Sustainable Management Promotion Organization

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

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



Your Dreams, Our Challenge

Asia General Division, Architectural Glass Asia Pacific Company, Magnetron coated glass  
AGC Inc.



### Functional unit

1 m<sup>2</sup>

### System boundary

final products       intermediate products  
Raw material acquisition-Distribution-Production

### Main specifications of the product

Products : T-Sunlux、Planibel Magnetron Low-E  
Stopray、Iplus、SUNFORT

Production sites : Cikampek Factory (Indonesia)  
Samut Prakan Factory (Thailand)

Thickness range : 3~12mm

Weight : 15kg (at thickness=6.0mm)

Processing method : Magnetron enhanced sputtering

Main application : Architectural and Home appliances use

### Company Information

Sustainable Management Initiatives Group,  
Architectural Glass Asia Pacific Company, AGC Inc.

Tel : +81-3-5808-6604

<https://agc-glassasia.com/>

Registration#	JR-BW-23001E
PCR number	PA-171190-BW-01
PCR name	Processed glass
Publication date	3/6/2023
Verification date	2/17/2023
Verification method	Product-by-product
Verification#	JV-BW-23001
Expiration date	2/16/2028
<b>PCR review was conducted by:</b>	
Approval date	1/10/2023
PCR review	Ken Yamagishi
panel chair	Sustainable Management Promotion Organization

### Third party verifier\*

Yuki Sakamoto

Independent verification of data & declaration in accordance with ISO14025 and ISO21930

internal       external

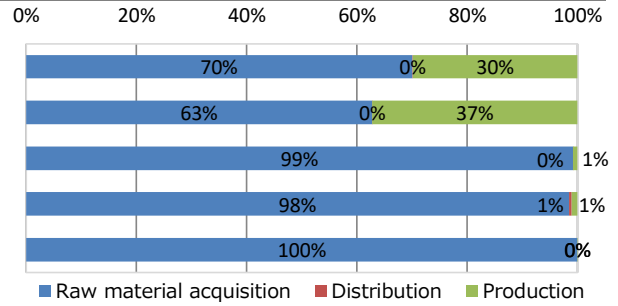
\*Auditor's name is stated if system certification has been performed.

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1. Results of life cycle impact assessment (LCIA)

Global warming IPCC2013 GWP100a	26	kg-CO <sub>2</sub> eq
Ozone layer destruction	0.00010	g-CFC-11eq
Acidification	0.069	kg-SO <sub>2</sub> eq
Photochemical ozone	0.00061	kg-C <sub>2</sub> H <sub>4</sub> eq
Eutrophication	0.000063	kg-PO <sub>4</sub> -eq



Parameter	stage	Unit	Total	Raw material acquisition	Distribution	Production
Global warming IPCC2013 GWP100a		kg-CO <sub>2</sub> eq	2.6E+01	1.8E+01	3.6E-02	7.7E+00
Ozone layer destruction		g-CFC-11eq	1.0E-04	6.3E-05	3.0E-10	3.7E-05
Acidification		kg-SO <sub>2</sub> eq	6.9E-02	6.8E-02	1.0E-05	5.5E-04
Photochemical ozone		kg-C <sub>2</sub> H <sub>4</sub> eq	6.1E-04	6.0E-04	3.1E-06	6.5E-06
Eutrophication		kg-PO <sub>4</sub> <sup>3-</sup> eq	6.3E-05	6.3E-05	2.5E-16	5.2E-09

2. Life cycle inventory analysis (LCI)

Parameter	Unit	Value
Non-renewable material resources	kg	2.0E+01
Non-renewable energy resources	MJ	3.5E+02
Renewable material resources	kg	4.0E+00
Renewable primary energy	MJ	2.0E+01
Consumption of freshwater	m <sup>3</sup>	4.4E-02

3. Material composition

Material	Value	Unit
Silica sand	44.3	%
Soda ash	13.4	%
Dolomite	15.4	%
Cullet	22.7	%
Others	4.1	%

(remark)

Due to rounding, the value in the total field and the total value of the breakdown may differ slightly.

4. Waste to disposal

Parameter	Unit	Value
Hazardous waste	kg	0.00E+00
Non-hazardous waste.	kg	5.4E-02

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

5. Additional explanation

The above tables 1.2.3.4. shows the calculation result of a representative product with a thickness of 6.0 mm. The range of applicable products is thickness of 3.0/4.0/5.0/6.0/8.0/10.0/12.0 mm. The environmental impact of each is calculated using the following calculation formula according to the Appendix D [Series products of PCR (Processed glass)]

A : Representative product with a thickness of 6.0 mm, B: The thickness of applicable series products (mm)

[Global warming IPCC2013 GWP100a] = 17.6 × B / 6 + 8.01

[Ozone layer destruction] = 3.88E-08 × B / 6 + 6.15 × E-08

[Acidification] = 6.80E-02 × B / 6 + 7.16 × E-04

[Photochemical ozone] = 5.95E-04 × B / 6 + 1.15 × E-05

[Eutrophication] = 6.23E-05 × B / 6 + 4.83 × E-08

Parameter	Unit	Thickness (mm)						
		3.0	4.0	5.0	6.0	8.0	10.0	12.0
Global warming IPCC2013 GWP100a	kg-CO <sub>2</sub> eq	1.7.E+01	2.0.E+01	2.3.E+01	2.6.E+01	3.1.E+01	3.7.E+01	4.3.E+01
Ozone layer destruction	g-CFC-11eq	8.1.E-08	8.7.E-08	9.3.E-08	1.0.E-07	1.1.E-07	1.3.E-07	1.4.E-07
Acidification	kg-SO <sub>2</sub> eq	3.5.E-02	4.6.E-02	5.7.E-02	6.9.E-02	9.1.E-02	1.1.E-01	1.4.E-01
Photochemical ozone	kg-C <sub>2</sub> H <sub>4</sub> eq	3.1.E-04	4.1.E-04	5.1.E-04	6.1.E-04	8.0.E-04	1.0.E-03	1.2.E-03
Eutrophication	kg-PO <sub>4</sub> <sup>3-</sup> eq	3.1.E-05	4.2.E-05	5.2.E-05	6.2.E-05	8.3.E-05	1.0.E-04	1.2.E-04



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#### 6-1. Supplementary environmental information

The Products are manufactured in ISO14001 certified factories.

#### 6-2. Regulated hazardous substances

Substance	CAS No.	Reference to standards or regulations
Sulfur dioxide	7446-09-5	Industrial Safety and Health Act
Cobalt monoxide	1307-96-6	Industrial Safety and Health Act
Nickel monoxide	1313-99-1	Industrial Safety and Health Act

#### 7. Assumptions of secondary data used

We use the IDEA v2.1.3 data

#### 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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