

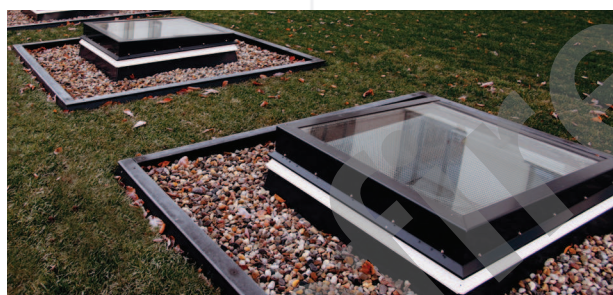
# EPD Glass Element

## Short version

Environmental Product Declaration  
Acc. to ISO 14025 and EN 15804

CI System Glass Element F | F100 | FE<sub>energysave</sub> (company EPD)

LAMILUX Heinrich Strunz GmbH



Declaration code  
EPD-EG-GB-11.1

September 2013



# Environmental Product Declaration in accordance with ISO 14025 and EN 15804

Glass element F, F100; FE<sub>energysave</sub> and smoke lift ME

Short version (Part 1 of 4)



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<b>Holder of the declaration</b>	LAMILUX Heinrich Strunz GmbH Zehstraße 2 D-95111 Rehau				

LCA results per m <sup>2</sup> Glass element F	Product stage	Construction process stage			Use stage			
		A1 – A3	A4	A5	B1	B2	B3	B4
Primary energy – non-renewable (PE <sub>n renw</sub> ) in MJ		4.610,00	44,50	90,60	-	26,44	110,00	-
Primary energy – renewable (PE <sub>renw</sub> ) in MJ		1.310,00	2,63	5,36	-	0,21	4,89	-
Global warming potential (GWP 100) in kg CO <sub>2</sub> equiv.		257,00	3,25	47,30	-	0,63	6,36	-
Ozone depletion potential (ODP) in kg R11 equiv.		2,57E-06	6,77E-11	3,17E-10	-	6,34E-11	7,05E-08	-
Acidification potential (AP) in kg SO <sub>2</sub> equiv.		1,62	0,02	-0,01	-	2,07E-03	0,02	-
Eutrophication potential (EP) in kg PO <sub>4</sub> <sup>3-</sup> equiv.		0,12	3,72E-03	-3,90E-04	-	2,40E-04	1,14E-03	-
Photochemical ozone creation potential (POCP) in kg C <sub>2</sub> H <sub>4</sub> equiv.		0,12	-5,32E-03	-2,04E-04	-	2,45E-04	2,47E-03	-
Abiotic depletion potential (elements) (ADP <sub>el.</sub> ) in kg Sb equiv.		2,97E-03	1,50E-07	-3,32E-07	-	1,03E-07	2,26E-04	-
Abiotic depletion potential (fossil) (ADP <sub>fos</sub> ) in MJ		4.600,00	44,50	-304,00	-	26,44	109,00	-
Water consumption in m <sup>3</sup>		763,00	0,20	0,40	-	0,23	3,63	-

All values marked with [-] are either marginal, not available or can not be stated. Not relevant modules are described in the annex.

Prof. Ulrich Sieberath Director of Institute	Florian Stich Verifier

# Environmental Product Declaration in accordance with ISO 14025 and EN 15804

Glass element F, F100; FE<sub>energysave</sub> and smoke lift ME

Short version (Part 1 of 4)



Declaration code	EPD-EG-11.1
Designation of declared product	<b>LAMILUX Glass element F,</b> LAMILUX Glass element F100, LAMILUX Glass element FE <sub>energysave</sub> , LAMILUX Smoke lift ME
Scope	Daylight systems for increased daylight incidence and natural ventilation and extraction

#### Basis

- EN ISO 14025:2011
- EN 15804:2012

Allgemeiner Leitfaden zur Erstellung von Typ III Umweltproduktdeklarationen Guidance on preparing Type III Environmental Product Declarations)

This Declaration is based on the PCR document „Fenster, Flachdach Fenster, Lichtkuppeln und Lichtbänder“ (windows, flat roof windows, light domes and continuous rooflights) PCR-FE-2.0: 2013“

#### Validity

This verified Environmental Product Declaration applies solely to the specified products and is valid for a period of 5 years from the date created.

The declaration holder assumes full liability for the underlying data, certificates and verifications.

Date of publication:  
30 September 2013

Next revision:  
30 September 2018

#### LCA basis

The LCA was prepared in accordance with EN ISO 14040 and EN ISO 14044. The base data includes both the data collected at the production site of Lamilux and generic data from the "GaBi 6" database. LCA calculations were based on the "cradle to grave" life cycle including all upstream processes (e.g. raw material extraction, etc.).

#### Notes on publication

"Conditions and Guidance on the Use of ift Test Documents" apply.

Use stage			End-of-life stage				Recycling potential
B5	B6	B7	C1	C2	C3	C4	
-	-	-	-	3,03	54,30	2,49	-2.250,00
-	-	-	-	0,18	3,86	0,13	-601,00
-	-	-	-	0,22	30,10	0,20	-181,00
-	-	-	-	4,61E-12	1,77E-07	9,88E-11	-2,77E-07
-	-	-	-	1,00E-03	0,02	6,54E-04	-1,12
-	-	-	-	2,43E-04	9,02E-03	4,69E-04	-0,07
-	-	-	-	-3,45E-04	1,30E-03	9,41E-05	-0,06
-	-	-	-	1,02E-08	7,44E-06	4,00E-08	-1,31E-03
-	-	-	-	3,03	54,20	2,49	-2.250,00
-	-	-	-	0,01	18,80	0,10	-613,00



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# Environmental Product Declaration in accordance with ISO 14025 and EN 15804

Glass element F, F100; FE<sub>energysave</sub> and smoke lift ME

Short version (Part 2 of 4)



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<b>Holder of the declaration</b>	LAMILUX Heinrich Strunz GmbH Zehstraße 2 D-95111 Rehau				

LCA results per m <sup>2</sup> Glass element F100	Product stage	Construction process stage			Use stage			
		A1 – A3	A4	A5	B1	B2	B3	B4
Primary energy – non-renewable (PE <sub>n,renw</sub> ) in MJ		2.420,00	39,80	-304,00	-	26,44	110,00	-
Primary energy – renewable (PE <sub>renw</sub> ) in MJ		690,00	2,36	0,72	-	0,21	4,89	-
Global warming potential (GWP 100) in kg CO <sub>2</sub> equiv.		82,70	2,90	47,30	-	0,63	6,36	-
Ozone depletion potential (ODP) in kg R11 equiv.		6,39E-07	6,06E-11	3,17E-10	-	6,34E-11	7,05E-08	-
Acidification potential (AP) in kg SO <sub>2</sub> equiv.		0,44	0,01	-0,01	-	2,07E-03	0,02	-
Eutrophication potential (EP) in kg PO <sub>4</sub> <sup>3-</sup> equiv.		0,07	3,33E-03	-3,90E-04	-	2,40E-04	1,14E-03	-
Photochemical ozone creation potential (POCP) in kg C <sub>2</sub> H <sub>4</sub> equiv.		0,07	-4,76E-03	-2,04E-04	-	2,45E-04	2,47E-03	-
Abiotic depletion potential (elements) (ADP <sub>el.</sub> ) in kg Sb equiv.		1,38E-03	1,34E-07	-3,32E-07	-	1,03E-07	2,26E-04	-
Abiotic depletion potential (fossil) (ADP <sub>fos</sub> ) in MJ		2.420,00	39,80	-304,00	-	26,44	109,00	-
Water consumption in m <sup>3</sup>		107,00	0,18	0,73	-	0,23	3,63	-

All values marked with [-] are either marginal, not available or can not be stated. Not relevant modules are described in the annex.

Prof. Ulrich Sieberath Director of Institute	Florian Stich Verifier



# Environmental Product Declaration in accordance with ISO 14025 and EN 15804

Glass element F, F100; FE<sub>energysave</sub> and smoke lift ME

Short version (Part 2 of 4)



Declaration code	EPD-EG-11.1
Designation of declared product	LAMILUX Glass element F, <b>LAMILUX Glass element F100</b> , LAMILUX Glass element FE <sub>energysave</sub> , LAMILUX Smoke lift ME
Scope	Daylight systems for increased daylight incidence and natural ventilation and extraction

#### Basis

- EN ISO 14025:2011
- EN 15804:2012

Allgemeiner Leitfaden zur Erstellung von Typ III Umweltproduktdeklarationen Guidance on preparing Type III Environmental Product Declarations)

This Declaration is based on the PCR document „Fenster, Flachdach Fenster, Lichtkuppeln und Lichtbänder“ (windows, flat roof windows, light domes and continuous rooflights) PCR-FE-2.0: 2013“

#### Validity

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30 September 2013

Next revision:  
30 September 2018

#### LCA basis

The LCA was prepared in accordance with EN ISO 14040 and EN ISO 14044. The base data includes both the data collected at the production site of Lamilux and generic data from the "GaBi 6" database. LCA calculations were based on the "cradle to grave" life cycle including all upstream processes (e.g. raw material extraction, etc.).

#### Notes on publication

"Conditions and Guidance on the Use of ift Test Documents" apply.

Use stage			End-of-life stage				Recycling potential
B5	B6	B7	C1	C2	C3	C4	D
-	-	-	-	2,71	77,60	2,82	-642,00
-	-	-	-	0,16	5,74	0,15	-12,20
-	-	-	-	0,20	38,10	0,23	-42,30
-	-	-	-	4,13E-12	1,50E-07	1,10E-10	-2,43E-07
-	-	-	-	8,98E-04	0,03	7,12E-04	-0,26
-	-	-	-	2,17E-04	8,13E-03	5,60E-04	-0,03
-	-	-	-	-3,09E-04	1,64E-03	1,05E-04	-0,02
-	-	-	-	9,12E-09	1,65E-05	4,41E-08	-6,91E-04
-	-	-	-	2,71	77,50	2,82	-641,00
-	-	-	-	0,01	17,90	0,11	-13,90



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# Environmental Product Declaration in accordance with ISO 14025 and EN 15804

Glass element F, F100; FE<sub>energysave</sub> and smoke lift ME

Short version (Part 3 of 4)



<b>Programme operator</b>	ift Rosenheim GmbH Theodor-Gietl-Strasse 7-9 83026 Rosenheim		<b>LCA analyst</b>	Brands & values GmbH Karl-Ferdinand-Braun Str.2 28359 Bremen	
<b>Holder of the declaration</b>	LAMILUX Heinrich Strunz GmbH Zehstraße 2 D-95111 Rehau				

LCA results per m <sup>2</sup> Glass element FE <sub>energysave</sub>	Product stage	Construction process stage			Use stage			
		A1 – A3	A4	A5	B1	B2	B3	B4
Primary energy – non-renewable (PE <sub>n renw</sub> ) in MJ		7.330,00	62,70	-312,00	-	26,44	110,00	-
Primary energy – renewable (PE <sub>renw</sub> ) in MJ		1.700,00	3,71	0,74	-	0,21	4,89	-
Global warming potential (GWP 100) in kg CO <sub>2</sub> equiv.		421,00	4,58	48,60	-	0,63	6,36	-
Ozone depletion potential (ODP) in kg R11 equiv.		3,92E-06	9,55E-11	3,26E-10	-	6,34E-11	7,05E-08	-
Acidification potential (AP) in kg SO <sub>2</sub> equiv.		2,36	0,02	-0,01	-	2,07E-03	0,02	-
Eutrophication potential (EP) in kg PO <sub>4</sub> <sup>3-</sup> equiv.		0,18	5,25E-03	-3,98E-04	-	2,40E-04	1,14E-03	-
Photochemical ozone creation potential (POCP) in kg C <sub>2</sub> H <sub>4</sub> equiv.		0,19	-7,51E-03	-2,07E-04	-	2,45E-04	2,47E-03	-
Abiotic depletion potential (elements) (ADP <sub>el.</sub> ) in kg Sb equiv.		4,15E-03	2,11E-07	-3,40E-07	-	1,03E-07	2,26E-04	-
Abiotic depletion potential (fossil) (ADP <sub>fos</sub> ) in MJ		7.330,00	62,70	-312,00	-	26,44	109,00	-
Water consumption in m <sup>3</sup>		1.140,00	0,28	0,75	-	0,23	3,63	-

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Prof. Ulrich Sieberath Director of Institute	Florian Stich Verifier

# Environmental Product Declaration in accordance with ISO 14025 and EN 15804

Glass element F, F100; FE<sub>energysave</sub> and smoke lift ME

Short version (Part 3 of 4)



Declaration code	EPD-EG-11.1
Designation of declared product	LAMILUX Glass element F, LAMILUX Glass element F100, <b>LAMILUX Glass element FE<sub>energysave</sub></b> , LAMILUX Smoke lift ME
Scope	Daylight systems for increased daylight incidence and natural ventilation and extraction

#### Basis

- EN ISO 14025:2011
- EN 15804:2012

Allgemeiner Leitfaden zur Erstellung von Typ III Umweltproduktdeklarationen Guidance on preparing Type III Environmental Product Declarations)

This Declaration is based on the PCR document „Fenster, Flachdach Fenster, Lichtkuppeln und Lichtbänder“ (windows, flat roof windows, light domes and continuous rooflights) PCR-FE-2.0: 2013“

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Next revision:  
30 September 2018

#### LCA basis

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#### Notes on publication

"Conditions and Guidance on the Use of ift Test Documents" apply.

Use stage			End-of-life stage				Recycling potential
B5	B6	B7	C1	C2	C3	C4	D
-	-	-	-	4,27	98,30	4,78	-3.350,00
-	-	-	-	0,25	6,53	0,24	-846,00
-	-	-	-	0,31	64,20	0,37	-269,00
-	-	-	-	6,50E-12	3,09E-07	1,81E-10	-3,45E-07
-	-	-	-	1,41E-03	0,03	1,16E-03	-1,58
-	-	-	-	3,42E-04	0,02	9,69E-04	-0,09
-	-	-	-	-4,86E-04	2,33E-03	1,72E-04	-0,09
-	-	-	-	1,44E-08	5,96E-06	7,18E-08	-2,08E-03
-	-	-	-	4,27	98,00	4,78	-3.350,00
-	-	-	-	0,02	30,90	0,18	-862,00



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# Environmental Product Declaration in accordance with ISO 14025 and EN 15804

Glass element F, F100; FE<sub>energysave</sub> and smoke lift ME

Short version (Part 4 of 4)



<b>Programme operator</b>	ift Rosenheim GmbH Theodor-Gietl-Strasse 7-9 83026 Rosenheim		<b>LCA analyst</b>	Brands & values GmbH Karl-Ferdinand-Braun Str.2 28359 Bremen	
<b>Holder of the declaration</b>	LAMILUX Heinrich Strunz GmbH Zehstraße 2 D-95111 Rehau				

LCA results per m <sup>2</sup> Smoke lift ME	Product stage	Construction process stage			Use stage			
		A1 – A3	A4	A5	B1	B2	B3	B4
Primary energy – non-renewable (PE <sub>n renw</sub> ) in MJ		4.880,00	50,20	-302,00	-	26,44	110,00	-
Primary energy – renewable (PE <sub>renw</sub> ) in MJ		1.340,00	2,97	0,71	-	0,21	4,89	-
Global warming potential (GWP 100) in kg CO <sub>2</sub> equiv.		298,00	3,66	47,10	-	0,63	6,36	-
Ozone depletion potential (ODP) in kg R11 equiv.		2,58E-06	7,64E-11	3,16E-10	-	6,34E-11	7,05E-08	-
Acidification potential (AP) in kg SO <sub>2</sub> equiv.		1,61	0,02	-0,01	-	2,07E-03	0,02	-
Eutrophication potential (EP) in kg PO <sub>4</sub> <sup>3-</sup> equiv.		0,14	4,20E-03	-3,88E-04	-	2,40E-04	1,14E-03	-
Photochemical ozone creation potential (POCP) in kg C <sub>2</sub> H <sub>4</sub> equiv.		0,13	-6,01E-03	-2,03E-04	-	2,45E-04	2,47E-03	-
Abiotic depletion potential (elements) (ADP <sub>el.</sub> ) in kg Sb equiv.		2,12E-03	1,69E-07	-3,31E-07	-	1,03E-07	2,26E-04	-
Abiotic depletion potential (fossil) (ADP <sub>fos</sub> ) in MJ		4.880,00	50,20	-302,00	-	26,44	109,00	-
Water consumption in m <sup>3</sup>		790,00	0,22	0,73	-	0,23	3,63	-

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Prof. Ulrich Sieberath Director of Institute	Florian Stich Verifier



# Environmental Product Declaration in accordance with ISO 14025 and EN 15804

## Glass element F, F100; FE<sub>energysave</sub> and smoke lift ME

Short version (Part 4 of 4)



Declaration code	EPD-EG-11.1
Designation of declared product	LAMILUX Glass element F, LAMILUX Glass element F100, LAMILUX Glass element FE <sub>energysave</sub> , <b>LAMILUX Smoke lift ME</b>
Scope	Daylight systems for increased daylight incidence and natural ventilation and extraction

### Basis

- EN ISO 14025:2011
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### Notes on publication

"Conditions and Guidance on the Use of ift Test Documents" apply.

Use stage			End-of-life stage				Recycling potential
B5	B6	B7	C1	C2	C3	C4	D
-	-	-	-	3,42	63,60	2,64	-2.550,00
-	-	-	-	0,20	4,54	0,15	-661,00
-	-	-	-	0,25	28,30	0,21	-205,00
-	-	-	-	5,20E-12	2,11E-07	1,09E-10	-3,02E-07
-	-	-	-	1,13E-03	0,02	7,38E-04	-1,29
-	-	-	-	2,74E-04	0,01	4,64E-04	-0,08
-	-	-	-	-3,89E-04	1,49E-03	1,04E-04	-0,07
-	-	-	-	1,15E-08	8,96E-06	4,47E-08	-1,06E-03
-	-	-	-	3,42	63,60	2,64	-2.550,00
-	-	-	-	0,02	22,50	0,11	-675,00



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# Prefire Lamilux

Este documento no tiene valor acreditativo sino incluye los datos de la obra, y se adjunta el certificado de instalación de Prefire.



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