

Environmental Product Declaration (EPD)

short version

Declaration code: EPD-LPG-GB-28.0



LAMBERTS

**Glasfabrik Lamberts
GmbH & Co. KG**

Cast glass

Patterned, wired, solar and U-profiled glasses



Basic principles:

DIN EN ISO 14025
EN15804

Company-EPD
Environmental
Product Declaration

date of issue:
26.09.2017

next revision:
26.09.2022





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Program operator	ift Rosenheim GmbH Theodor-Gietl-Straße 7-9 83026 Rosenheim		
Practitioner of the LCA	ift Rosenheim GmbH Theodor-Gietl-Straße 7-9 83026 Rosenheim		
Declaration holder	Glasfabrik Lamberts GmbH & Co. KG Egerstraße 197 95632 Wunsiedel Holenbrunn		
Declaration code	EPD-LPG-GB-28.0		
Designation of the declared product	Cast glass: Flat patterned glass, wired glass, solar glass as well as LINIT channel glass (U-profiled glass)		
Scope	Architecture and facade construction		
Basis	This EPD has been developed on the basis of EN ISO 14025: 2011 and EN 15804:2012+A1:2013. In addition, the general guide for the preparation of Type III environmental product declarations applies. The declaration is based on the PCR document „Flachglas im Bauwesen“ PCR-FG-1.2:2016		
Validity	date of issue: 26.09.2017	last revision: 26.10.2017	next revision: 26.09.2022
	This verified company Environmental Product Declaration applies solely to the specified products and is valid for a period of 5 years from the date of issue according to EN 15804.		
LCA basis	The LCA was prepared in accordance with EN ISO 14040 and EN ISO 14044. The base data include both data collected at Glasfabrik Lamberts GmbH & Co. KG and generic data from the „GaBi ts“ database. The Life Cycle Assessment was calculated through the life cycle (cradle to gate with options) taking into account all upstream chains such as raw material exploitation.		
Notes	The "Conditions and Guidance on the Use of ift Test Documents" apply. The declaration holder assumes full liability for the underlying data, certificates and verifications.		
			
	Prof. Ulrich Sieberath Director of Institute		Patrick Wortner, MBA and Eng., Dipl.-Ing. (FH) independent, external verifier

Note: Use the extended version of the EPD for further information.

Product group: glass

Results per m ² and mm Cast glass (Part 1 of 2)	Unit	PG 1		PG 2		PG 3		C4 = 100%-Scenario (landfill) C3+D = 100%-scenario (Recycling and potential)	PG 1 + 2		PG 3	
		A1 – A3	C4	A1 – A3	C4	A1 – A3	C4		C3	D	C3	D
Global warming potential (GWP)	kg CO ₂ -Äqv.	1,81	0,28	1,61	0,28	1,23	0,19		0,01	-1,51	0,01	-1,04
Ozone depletion potential (ODP)	kg R11-Äqv.	9,65E-08	1,00E-11	6,04E-11	1,00E-11	5,50E-10	6,88E-12		3,91E-13	-1,03E-11	4,56E-13	-7,10E-12
Acidification potential of soil and water (AP)	kg SO ₂ -Äqv.	0,01	9,89E-04	0,01	9,89E-04	4,70E-03	6,79E-04		2,52E-05	-0,01	2,94E-05	-5,60E-03
Eutrophication potential (EP)	kg PO ₄ ³⁻ -Äqv.	1,07E-03	1,05E-04	9,96E-04	1,05E-04	7,08E-04	7,24E-05		2,28E-06	-1,04E-03	2,66E-06	-7,11E-04
Photochemical ozone creation potential (POCP)	kg C ₂ H ₄ -Äqv.	6,47E-04	6,83E-05	5,20E-04	6,83E-05	4,02E-04	4,69E-05		1,61E-06	1,08E-03	1,87E-06	7,45E-04
Abiotic depletion potential - non-fossil resources (ADP - elements)	kg Sb-Äqv.	2,14E-05	1,11E-07	1,99E-05	1,11E-07	1,37E-05	7,60E-08		3,52E-09	-3,21E-06	4,11E-09	-2,20E-06
Abiotic depletion potential - fossil resources	MJ	52,95	3,16	51,25	3,16	36,40	2,17		0,09	-20,11	0,11	-13,81
Use of resources												
Use of renewable primary energy - excluding renewable primary energy resources used as raw materials	MJ	39,23	-	7,20	-	5,04	-		-	-	-	-
Use of renewable primary energy resources used as raw materials (material use)	MJ	0	-	0	-	0	-		-	-	-	-
Total use of renewable primary energy resources (primary energy and renewable primary energy resources used as raw materials) (energy + material use)	MJ	39,23	1,43	7,20	1,43	5,04	0,98		0,05	-1,47	0,06	-1,01
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials.	MJ	55,31	-	53,59	-	38,02	-		-	-	-	-
Use of non-renewable primary energy resources used as raw materials (material use)	MJ	0	-	0	-	0	-		-	-	-	-
Total use of non-renewable primary energy resources (primary energy and non-renewable primary energy resources used as raw materials) (energy + material use)	MJ	55,31	4,72	53,59	4,72	38,02	3,24		0,15	-21,72	0,18	-14,92
Use of secondary materials	kg	0,81	0	0,81	0	0,56	0		0	0	0	0



Product group: glass

Results per m ² and mm Cast glass (Part 2 of 2)		PG 1		PG 2		PG 3		PG 1 + 2		PG 3	
Use of resources	Unit	A1 – A3	C4	A1 – A3	C4	A1 – A3	C4	C3	D	C3	D
Use of renewable secondary fuels	MJ	0	0	0	0	0	0	0	0	0	0
Use of non-renewable secondary fuels	MJ	0	0	0	0	0	0	0	0	0	0
Use of net fresh water	m ³	0,05	2,06E-03	0,02	2,06E-03	0,01	1,42E-03	7,50E-05	-3,22E-03	8,76E-05	-2,21E-03
Waste categories	Unit										
Hazardous waste disposed	kg	1,34E-07	1,40E-08	1,10E-07	1,40E-08	5,91E-08	9,64E-09	6,26E-11	-1,87E-08	7,30E-11	-1,28E-08
Non-hazardous waste disposed (municipal waste)	kg	0,16	3,65	0,15	3,65	0,11	2,51	1,02E-04	-0,20	1,19E-04	-0,14
Radioactive waste	kg	9,36E-04	6,23E-04	9,29E-04	6,23E-04	6,45E-04	4,28E-04	2,40E-05	-6,42E-04	2,80E-05	-4,41E-04
Output material flows	Unit										
Components for re-use	kg	0	0	0	0	0	0	0	-	0	-
Materials for recycling	kg	1,77E-06	0	1,77E-06	0	1,48E-02	0	2,83	-	1,94	-
Materials for energy recovery	kg	0	0	0	0	0	0	0	-	0	-
Exported energy (electricity)	MJ	0	0	0	0	0	0	0	-	0	-
Exported energy (thermal energy)	MJ	0	0	0	0	0	0	0	-	0	-

Calculation of channel glass was based on the declared product P23/60/7. The environmental impacts of differing channel glass can be calculated using the formula on the right and the factors given below:

$$P_{xx/xx/x} = x(P_{23/60/7}) * \text{factor } xx$$

Profile	proportions [mm]	kg/m ²	factor	Profile	proportions [mm]	kg/m ²	factor
P 15	150/41/6	21,3	0,84	P 15/60/7	150/60/7	29,3	1,15
P 23	232/41/6	19,4	0,76	P 18/60/7	180/60/7	27,2	1,07
P 26	262/41/6	18,7	0,74	P 23/60/7	232/60/7	25,4	1,00
P 33	331/41/6	17,8	0,70	P 26/60/7	262/60/7	24	0,94
P 50	498/41/6	16,9	0,67	P 33/60/7	331/60/7	23	0,91
				P 40/60/7	400/60/7	21,8	0,86

Imprint

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Notes

This EPD is mainly based on the work and findings of the Institut für Fenstertechnik e.V., Rosenheim (ift Rosenheim) and specifically on the ift-Guideline NA.01/1 – Guidance on the Preparation of Type III Environmental Product Declarations.

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