

Environmental Product Declaration (EPD)

Short Version

Declaration Code: EPD-KDK-26.0



**König GmbH
& Co KG**

Profiles

Ceiling profiles corrosion-protected



Basic principles:

DIN EN ISO 14025
EN15804

Company-EPD
Environmental
Product Declaration

Date of issue:
13.04.2017

next revision:
13.04.2022



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LCA specialist	ift Rosenheim GmbH Theodor-Gietl-Straße 7-9 83026 Rosenheim		
Declaration holder	König GmbH & Co KG Nienhagener Straße 30 37186 Moringen		
Declaration code	EPD-KDK-26.0		
Designation of the declared product	Ceiling profiles corrosion-protected (including accessory items like cross connector and longitudinal connector)		
scope	Drywall installation / interior 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 „Profile aus Stahlblech“ – PCR-PS-1.1:2017		
validity	Date of issue: 13.04.2017	last revision: 13.04.2017	next revision: 13.04.2022
	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 König GmbH & Co KG and generic data from the „GaBi ts“ database. The Life Cycle Assessment was calculated through the life cycle „cradle to grave“ taking into account all upstream chains such as raw material exploitation.		
Notes on publication	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 External verifier	
Note: Further information can be found in the long version.			

Product group: profiles

Results per m Ceiling profiles corrosion-protected (including accessory items like cross connector and longitudinal connector) (Part 1)		CD 60/27			UD 28/48 Hutdecke 48			Hutdecke 98		
Environmental Impacts	Unit	A1-A3	C3	D	A1-A3	C3	D	A1-A3	C3	D
Global warming potential (GWP)	kg CO ₂ -Äqv.	1,47E+00	3,77E-02	-7,67E-01	1,20E+00	3,09E-02	-6,29E-01	1,53E+00	3,93E-02	-7,99E-01
Ozone depletion potential (ODP)	kg R11-Äqv.	1,15E-08	2,68E-11	-1,23E-11	9,42E-09	2,20E-11	-1,01E-11	1,20E-08	2,79E-11	-1,28E-11
Acidification potential of soil and water (AP)	kg SO ₂ -Äqv.	5,12E-03	1,05E-04	-2,62E-03	4,20E-03	8,62E-05	-2,15E-03	5,34E-03	1,10E-04	-2,73E-03
Eutrophication potential (EP)	kg PO ₄ ³⁻ -Äqv.	3,75E-04	9,40E-06	-2,25E-04	3,07E-04	7,71E-06	-1,85E-04	3,91E-04	9,80E-06	-2,35E-04
Photochemical ozone creation potential (POCP)	kg C ₂ H ₄ -Äqv.	6,91E-04	7,24E-06	-3,67E-04	5,67E-04	5,94E-06	-3,01E-04	7,20E-04	7,55E-06	-3,83E-04
Abiotic depletion potential - non-fossil resources (ADP - elements)	kg Sb-Äqv.	1,93E-05	1,22E-08	-4,66E-05	1,58E-05	1,00E-08	-3,82E-05	2,01E-05	1,27E-08	-4,86E-05
Abiotic depletion potential - fossil resources	MJ	1,64E+01	4,09E-01	-8,68E+00	1,34E+01	3,35E-01	-7,12E+00	1,71E+01	4,26E-01	-9,05E+00
Use of resources	Unit	A1-A3	C3	D	A1-A3	C3	D	A1-A3	C3	D
Use of renewable primary energy - excluding renewable primary energy resources used as raw materials	MJ	8,29E-01	-	-	6,80E-01	-	-	8,65E-01	-	-
Use of renewable primary energy resources used as raw materials (material use)	MJ	0,00E+00	-	-	0,00E+00	-	-	0,00E+00	-	-
Total use of renewable primary energy resources (primary energy and renewable primary energy resources used as raw materials) (energy + material use)	MJ	8,29E-01	1,84E-01	-4,74E-01	6,80E-01	1,51E-01	-3,89E-01	8,65E-01	1,92E-01	-4,94E-01
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials.	MJ	1,71E+01	-	-	1,40E+01	-	-	1,78E+01	-	-
Use of non-renewable primary energy resources used as raw materials (material use)	MJ	0,00E+00	-	-	0,00E+00	-	-	0,00E+00	-	-
Total use of non-renewable primary energy resources (primary energy and non-	MJ	1,71E+01	6,57E-01	-8,95E+00	1,40E+01	5,39E-01	-7,35E+00	1,78E+01	6,86E-01	-9,34E+00

Product group: profiles

renewable primary energy resources used as raw materials) (energy + material use)										
Use of secondary materials	kg	0	0	0	0	0	0	0	0	0

Results per rm Ceiling profiles corrosion-protected (including accessory items like cross connector and longitudinal connector) (Part 2)		CD 60/27			UD 28/48 Hutdecke 48			Hutdecke 98		
Use of resources	Unit	A1-A3	C3	D	A1-A3	C3	D	A1-A3	C3	D
Use of renewable secondary fuels	MJ	0,00E+00	0	0	0,00E+00	0	0	0,00E+00	0	0
Use of non-renewable secondary fuels	MJ	0,00E+00	0	0	0,00E+00	0	0	0,00E+00	0	0
Use of net fresh water	m ³	2,30E-03	2,84E-04	-3,53E-03	1,89E-03	2,33E-04	-2,90E-03	2,40E-03	2,96E-04	-3,68E-03
Waste categories	Unit	A1-A3	C3	D	A1-A3	C3	D	A1-A3	C3	D
Hazardous waste disposed	kg	2,01E-08	4,17E-10	-9,79E-09	1,65E-08	3,42E-10	-8,04E-09	2,10E-08	4,35E-10	-1,02E-08
Non-hazardous waste disposed (municipal waste)	kg	7,71E-03	3,97E-04	-1,03E-02	6,33E-03	3,26E-04	-8,43E-03	8,04E-03	4,14E-04	-1,07E-02
Radioactive waste	kg	2,33E-04	9,92E-05	-1,09E-04	1,91E-04	8,14E-05	-8,96E-05	2,43E-04	1,03E-04	-1,14E-04
Output material flows	Unit	A1-A3	C3	D	A1-A3	C3	D	A1-A3	C3	D
Components for re-use	kg	0	0	-	0	0	-	0	0	-
Materials for recycling	kg	0,0117	5,68E-01	-	0,0096	4,66E-01	-	0,0122	5,92E-01	-
Materials for energy recovery	kg	0	0	-	0	0	-	0	0	-
Exported energy (electricity)	MJ	0	0	-	0	0	-	0	0	-
Exported energy (thermal energy)	MJ	0	0	-	0	0	-	0	0	-

Product group: profiles

Results per kg Ceiling profile corrosion-protected (Part 1)				
Environmental Impacts	Unit	A1-A3	C3	D
Global warming potential (GWP)	kg CO ₂ -Äqv.	2,51	0,0645	-1,31
Ozone depletion potential (ODP)	kg R11-Äqv.	1,96E-08	4,58E-11	-2,10E-11
Acidification potential of soil and water (AP)	kg SO ₂ -Äqv.	0,00876	0,00018	-0,00447
Eutrophication potential (EP)	kg PO ₄ ³⁻ -Äqv.	0,00064	1,61E-05	-0,000385
Photochemical ozone creation potential (POCP)	kg C ₂ H ₄ -Äqv.	0,00118	1,24E-05	-0,000627
Abiotic depletion potential - non-fossil resources (ADP - elements)	kg Sb-Äqv.	3,30E-05	2,09E-08	-7,97E-05
Abiotic depletion potential - fossil resources	MJ	28	0,698	-14,8
Use of resources	Unit	A1-A3	C3	D
Use of renewable primary energy - excluding renewable primary energy resources used as raw materials	MJ	1,42	-	-
Use of renewable primary energy resources used as raw materials (material use)	MJ	0	-	-
Total use of renewable primary energy resources (primary energy and renewable primary energy resources used as raw materials) (energy + material use)	MJ	1,42	0,315	-0,81
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials.	MJ	29,2	-	-
Use of non-renewable primary energy resources used as raw materials (material use)	MJ	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	29,2	1,12	-15,3
Use of secondary materials	kg	0	0	0

Results per kg Ceiling profile corrosion-protected (Part 2)				
Use of resources	Unit	A1-A3	C3	D
Use of renewable secondary fuels	MJ	0	0	0
Use of non-renewable secondary fuels	MJ	0	0	0
Use of net fresh water	m ³	0,00393	0,000485	-0,00604
Waste categories	Unit	A1-A3	C3	D
Hazardous waste disposed	kg	3,44E-08	7,14E-10	-1,67E-08
Non-hazardous waste disposed (municipal waste)	kg	0,0132	0,000678	-0,0176
Radioactive waste	kg	0,000398	0,00017	-0,000187
Output material flows	Unit	A1-A3	C3	D
Components for re-use	kg	0	0	-
Materials for recycling	kg	0,021	0,97	-
Materials for energy recovery	kg	0	0	-
Exported energy (electricity)	MJ	0	0	-
Exported energy (thermal energy)	MJ	0	0	-

Product group: profiles

For the profiles marked green, the particular environmental impacts were calculated per running meter (rm).

For all other profiles listed, it's possible to calculate the particular figure with the given environmental impacts per kg.

Sample calculation:

Chosen product
UD 28 Profil:

mass: 0,38 kg/rm

GWP A1- A3 for 1kg
2,51 kg CO₂-Äqv.

$$= 2,51 \text{ kg CO}_2\text{-Äqv.} \cdot 0,38 \text{ kg/rm} = 0,954 \text{ kg CO}_2\text{-Äqv. /rm}$$

GWP for UD 28 = 0,954 kg CO₂-Äqv. /rm

Gewichte Deckenprofile		
Pos.	Profil	Gewicht/lfm
1	CD60/27	0,59
2	UD28	0,38
3	UD28/48	0,48
4	Hutdecke 48	0,48
5	Hutdecke 98	0,61

For further assistance for building auditors, refer to the following conversion table. Due to inaccuracy, this methode is only valid for approximate calculation.

Grund. Tragp.	1,000 m	0,750 m	0,500 m
0,625 m	1,66 kg/m ²	2,21 kg/m ²	3,32 kg/m ²
0,417 m	2,49 kg/m ²	3,32 kg/m ²	4,98 kg/m ²
0,313 m	3,32 kg/m ²	4,42 kg/m ²	6,63 kg/m ²

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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