

# DIN EPD

Miljøvaredeklarasjon  
Sapa 1086SX window  
side hung open in  
3-glass, coated

**sapa:**

 Hydro

# DIN EPD

## CO2-AFTRYK FOR DIT PRODUKT



(GWP>Bidrag til global opvarmning

92%

af det aluminium som anvendes i dette projekt er CIRCAL



**CIRCAL 75R = 2.3 kg CO2 pr. kg Aluminium**

Hydro CIRCAL er en række produkter fremstillet med genbrugsskrot. Gennem brugen af genbrugsindhold reducerer vi energiforbruget drastisk, samtidig med at vi stadig kan tilbyde produkter af høj kvalitet. Vi kan altid garantere et CO2-aftryk under 2,3 kg CO2 pr. 1 kg aluminium produceret med Hydro CIRCAL.

Hydro er i dag den eneste producent i verden, der kan levere genanvendt aluminium af højeste kvalitet

0%

af aluminium brugt i dette projekt er REDUXA\*



**REDUXA 4.0 = 4 kg CO2 pr. kg Aluminium**

Hydro REDUXA er vores serie af aluminium med lavt kulstofindhold. Gennem brugen af vedvarende energikilder som vandkraft reducerer vi CO2-aftrykket pr. kg aluminium til mindre end en fjerdedel af det globale gennemsnit. Resultatet er verdens laveste CO2-aftryk fra aluminium til dato



8 % af det aluminium, der bruges i dette projekt, er Hydro Primary Aluminium

Hydro Primary Billets = 5,7 kg CO2 pr. kg aluminium

### Aluminiums CO2-aftryk afhængig af oprindelse

**2.3**

kg CO2 pr. kg  
Aluminium



**4.0**

kg CO2 pr. kg  
Aluminium



**5.7**

kg CO2 pr. kg  
Aluminium



**8.6\***

kg CO2 pr. kg  
Aluminium

Gennemsnitligt  
forbrugt  
primæraluminium  
i Europa

**16.7\***

kg CO2 pr. kg  
Aluminium

Primært/Global/  
Gennemsnit

\*8.6 = primært aluminium brugt i Europa (cradle to gate) - European Aluminium 2018 rapport

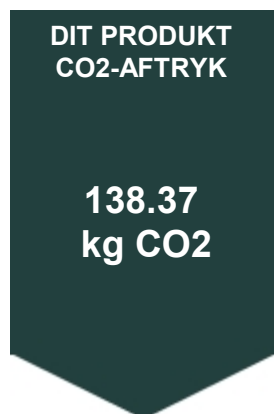
\*\*Globalt gennemsnit: 16,7 kgCO2e/kg (Kilde: IAI 2018-rapport baseret på 2015-data)

# EPD >> DIT PROJEKTS DETALJER

## DIT PRDUKTS CO2-AFTRYK



(GWP>Bidrag til global opvarmning)



DIT PRODUKT  
Vis der var anvendt primær Aluminium fra:



Ved at bruge vores løsninger på dette projekt reducerer du med:

-101.12  
kg CO2

**-42%**

Dine systemers CO2-aftryk sammenlignet med at bruge primært aluminium, der forbruges i Europa

-237.09  
kg CO2

**-63%**

Dine systemers CO2-aftryk sammenlignet med at bruge primært aluminium med globalt gennemsnit



## VIDSTE DU?

Du kan bede din salgsekspert om at have dette projekt udelukkende i CIRCAL for at reducere CO2-aftrykket fra dine byggesystemer endnu mere

Hvis du beslutter dig for udelukkende at bruge CIRCAL på dette projekt, reducerer du med:

-105.75  
kg CO2

**-44%**

Dine systemers CO2-aftryk sammenlignet med at bruge primært aluminium, der forbruges i Europa

-241.72  
kg CO2

**-64%**

Dine systemers CO2-aftryk sammenlignet med at bruge primært aluminium med globalt gennemsnit

\*Europa = 8,6 kg CO2 / kg Aluminium = primært aluminium brugt i Europa (cradle to gate). Rapport for europæisk aluminium 2018

\*\*Globalt gennemsnit: 16,7 kgCO2e/kg (Kilde: IAI 2018-rapport baseret på 2015-data)

# EPD >> SÅDAN LÆSER DU DET



Din EPD er genereret af IBU (IBU - Institut Bauen und Umwelt e.V.), verificeret af en uafhængig tredjepart i henhold til ISO 14025. CEN-standarden EN 15804 fungerer som kerne-PCR (Product Category Rules)

Denne EPD blev automatisk genereret til dit projekt

Det omfatter alle beskrevne systemer inklusive deres komponenter samt det valgte glas, i de angivne dimensioner



Aluminium

Isolerede profiler

Glas

Fugebånd

Beslagning

...\*

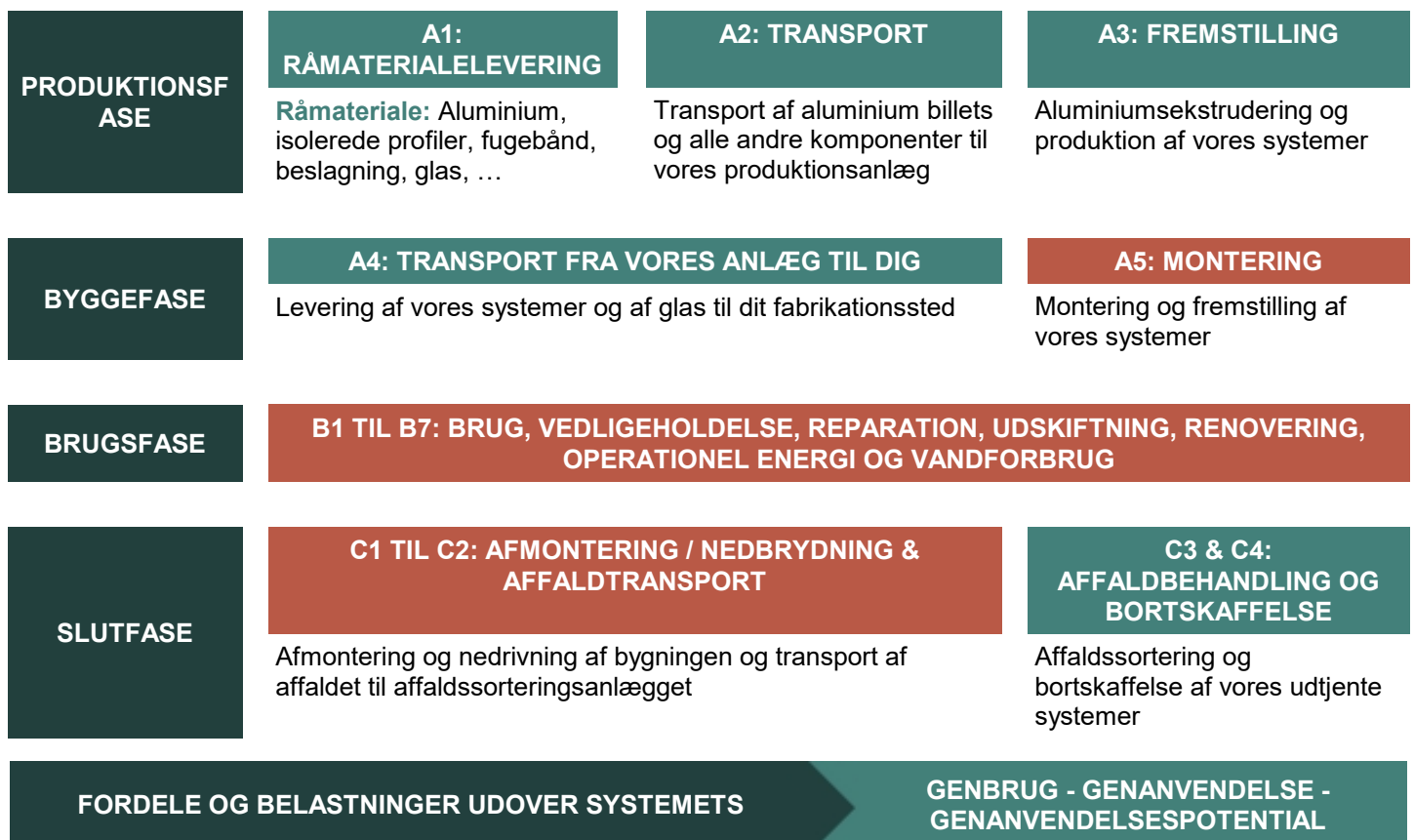
\* Alle andre komponenter, som du bestiller fra varemærket

Dit Projekt

Materialer inkluderet i denne EPD

Alle andre byggematerialer er undtaget fra denne EPD

## OMFANG AF DIN EPD



Er inkluderet i din EPD

Er ekskluderet fra din EPD



# Environmental product declaration

## Summarized EPD



Declaration owner: Hydro Building Systems Germany GmbH  
Construction project: EPD - Rapport  
Publisher: Hydro Building Systems Sweden AB

Date of issue: 24/04/2023



## The Summarized EPD includes the following listed products

Declaration number	Declared product	Declared unit (mm)
Sapa 1086SX window side hung open in 3-glass, coated	K.EPD_Rapport.2.10.2023.10.24.16 AM	1,480 x 1,230

## LCA: Results

The results of the impact assessment, resource use and waste and other output streams are shown below  
The results are calculated from the values of the individual EPDs.

**SPECIFICATION OF THE SYSTEM LIMITS (X = INCLUDED IN LIFE CYCLE ASSESSMENT, MND = MODULE NOT DECLARED)**

PRODUCT STAGE			CONSTRUCTION PROCESS STAGE		USE STAGE								END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARYS
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	Use	Maintenance	Repair	Replacement <sup>1)</sup>	Refurbishment <sup>1)</sup>	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential	
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D	
X	X	X	X	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	X	X	X	

### RESULTS OF THE LIFE CYCLE ASSESSMENT ENVIRONMENTAL IMPACT:

Parameter	Parameter	Unit	A1-A3	A4	C3	C4	D
GWP	Global warming potential	[kg CO <sub>2</sub> -Eq.]	138.37	2.97	13.37	1.48E-02	-18.09
ODP	Depleting the stratospheric ozone layer	[kg CFC <sub>11</sub> -Eq.]	2.18E-06	0.00	1.50E-07	4.79E-16	-7.46E-07
AP	Acidification potential of soil and water	[kg SO <sub>2</sub> -Eq.]	8.44E-01	0.01	1.75E-02	8.83E-05	-8.60E-02
EP	Eutrophication	[kg (PO <sub>4</sub> ) <sup>3-</sup> -Eq.]	8.13E-02	0.00	4.17E-03	1.02E-05	-5.06E-03
POCP	Forming potential for tropospheric ozone	[kg Ethen-Eq.]	-2.78E-02	0.00	8.75E-04	6.79E-06	-6.62E-03
ADPE	Potential for the abiotic degradation of non-fossil resources	[kg Sb-Eq.]	1.66E-03	0.00	2.58E-05	5.46E-09	-1.02E-03
ADPF	Potential for the abiotic degradation of fossil fuels	[MJ]	2,127.97	40.48	24.14	2.05E-01	-197.81

### RESULTS OF THE LIFE CYCLE ASSESSMENT RESOURCE ACCOUNT:

Parameter	Parameter	Unit	A1-A3	A4	C3	C4	D
PERE	Renewable primary energy as an energy source	[MJ]	250.09	2.24	2.67E00	2.38E-02	-42.88
PERM	Renewable primary energy to the material use	[MJ]	0.44	0.00	0.00	0.00	0.00
PERT	Total renewable primary energy	[MJ]	250.53	2.24	3.11E00	2.68E-02	-78.44
PENRE	Non-renewable primary energy as an energy source	[MJ]	1,718.37	40.48	164.54	1.88E-02	-107.05
PENRM	Non-renewable primary energy to the material use	[MJ]	138.98	0.00	-136.94	0.00	0.00
PENRT	Total non-renewable primary energy	[MJ]	1,857.46	40.48	27.60	4.26E-02	-244.60
SM	Use of secondary materials	[kg]	26.19	0.00	0.00	0.00	0.00
RSF	Renewable secondary fuels	[MJ]	0.00	0.00	0.00	0.00	0.00
NRSF	Non-renewable secondary fuels	[MJ]	0.00	0.00	0.00	0.00	0.00
FW	Use of freshwater resources	[m <sup>3</sup> ]	6.00E-01	0.00	3.57E-02	5.20E-05	-1.57E-01

### RESULTS OF LIFE CYCLE ASSESSMENT OUTPUT RIVERS AND WASTE CATEGORIES:

Parameter	Parameter	Unit	A1-A3	A4	C3	C4	D
HWD	Hazardous waste of landfill	[kg]	1.41E-02	0.00	9.52E-02	3.62E-09	9.18E-03
NHWD	Discarded non-hazardous waste	[kg]	24.05	0.00	1.87E01	1.60E00	-5.60
RWD	Discarded radioactive waste	[kg]	3.64E-02	0.00	2.27E-04	3.46E-07	-1.26E-02
CRU	Components for reuse	[kg]	0.00	0.00	0.00	0.00	0.00
MFR	Materials for recycling	[kg]	0.00	0.00	14.39	0.00	53.46
MER	Materials for the energy recovery	[kg]	0.00	0.00	0.42	0.00	0.00
EEE	Exported electrical energy	[MJ]	0.00	0.00	16.61	0.00	0.00
EET	Exported thermal energy	[MJ]	0.00	0.00	29.97	0.00	0.00



## LCA: Scenarios and technical information

(according table chapter 4)

The following informations are basis for the declared modules and products in this summary EPD:

### Transport to construction site (A4)

Designation	Value	Unit
Liters of fuel		
Train (electric)	0.01158	l / 100 km
Plane (kerosine)	0.42164	l / 100 km
40 t truck (Diesel)	0.00165	l / 100 km
7,5 t truck (Diesel)	0.00591	l / 100 km
22 t truck (Diesel)	0.00231	l / 100 km
Ship (heavy heating oil)	0.00040	l / 100 km
Transport distance		
Train	0.00	km
Plane	0.00	km
40 t truck	0.00	km
7,5 t truck	0.00	km
22 t truck	500.00	km
Ship	0.00	km
Utilisation (including empty runs)		
Train	51	%
Plane	61	%
40 t truck	55	%
7,5 t truck	40	%
22 t truck	66	%
Ship	48	%
Volume utilisation factor	1	-

\*) The transport distance indicates the easy distance from the place of manufacture to the construction site.

### End of life cycle (C1-C4)

Designation	Value	Unit
Separately collected waste type	58.18	kg
Collected as mixed construction waste	14.81	kg
For reuse	0.00	kg
For recycling (D)	66.13	kg
For energy recovery (C3)	5.39	kg
For landfilling (C4)	2.09	kg
For thermal utilisation (C4)	0.00	kg

## Listing of the raw materials and the auxiliary materials

(according table chapter 2.5)

Designation	Value	Unit
EN AW-6005A	0.79	kg
A2-20H	0.07	kg
EN AC-42000	0.57	kg
X10CrNi18-8	0.22	kg
PA6	0.01	kg
ABS	0.02	kg
ZP5	0.28	kg
PE	0.08	kg
EPDM Foam	0.71	kg
CIRCAL 75	15.42	kg
Pulverbeschichtung	0.54	kg
Float glass	49.85	kg
PA66 GF25	3.05	kg
Eloxierung	0.00	kg
EPDM	0.72	kg
Silicone	0.39	kg
Rockwool 120kg	0.87	kg
Total weight	73.60	kg