

ENVIRONMENTAL PRODUCT DECLARATION

in accordance with ISO 14025, ISO 21930 and EN 15804

Owner of the declaration:	Saint-Gobain Sweden AB, Scanspac
Program operator:	The Norwegian EPD Foundation
Publisher:	The Norwegian EPD Foundation
Declaration number:	NEPD-1974-868-EN
Registration number:	NEPD-1974-868-EN
ECO Platform reference number:	-
Issue date:	03.01.2020
Valid to:	03.01.2025

Gypfill X-Ray Protection, Promix X-Ray Protection

Saint-Gobain Sweden AB, Scanspac

Scanspac

www.epd-norge.no



General information

Product:

Gypfill X-Ray Protection, Promix X-Ray Protection

Program operator:

The Norwegian EPD Foundation
Pb. 5250 Majorstuen, 0303 Oslo
Phone: +47 97722020

e-mail: post@epd-norge.no

Declaration number:

NEPD-1974-868-EN

ECO Platform reference number:
This declaration is based on Product Category Rules:

CEN Standard EN 15804:2012+A1:2013 serves as core PCR.
NPCR 009:2018 Part B for Technical - Chemical products in the
building and construction industry

Statement of liability:

The owner of the declaration shall be liable for the underlying
information and evidence. EPD Norway shall not be liable with
respect to manufacturer information, life cycle assessment data and
evidences.

Declared unit:

1 kg Gypfill X-Ray Protection, Promix X-Ray Protection

Declared unit with option:

A1,A2,A3,A4

Functional unit:
Verification:

Independent verification of data, other environmental information and
the declaration according to ISO14025:2010, § 8.1.3 and § 8.1.4

External

Third party verifier:

Sign



Senior Research Scientist, Anne Rønning

(Independent verifier approved by EPD Norway)

Owner of the declaration:

Saint-Gobain Sweden AB, Scanspac
Contact person: Christian Nilsson
Phone: +46 (0)19-46 34 00
e-mail: info@dalapro.se

Manufacturer:

Saint-Gobain Sweden AB, Scanspac

Place of production:

Saint Gobain Sweden AB, Scanspac
Site: Glanshammar, Kemivägen 7, 70597 Glanshammar, SWEDEN
Site: Sala, Norrängsgatan 35, 73338 Sala, SWEDEN

Management system:

ISO 9001, ISO 14001

Organisation no:

556241-2592

Issue date: 03.01.2020

Valid to: 03.01.2025

Year of study:

2018

Comparability:

EPD of construction products may not be comparable if they not
comply with EN 15804 and seen in a building context.

Author of the Life Cycle Assessment:

The declaration is developed using eEPD v3.0 from LCA.no
Approval:
Company specific data are:

Collected/registered by: Ellinor Johansson

Internal verification by: Christian Nilsson

Approved:

Sign



Håkon Hauan
Managing Director of EPD-Norway

Product

Product description:

Gypfill- and Promix X-Ray Protection Joint Mix is a wet ready mixed filler which is specially adapted to be used with lead-free Gyproc X-Ray plasterboards to get a lead-free wall system for X-Ray rooms. The filler is based on barium sulfate and is used for joints ,screw heads and any gaps or surface defects on the board in order to ensure the X-Ray protection. X-Ray Protection is a ready to use product.

X-Ray Protection is a jointing compound for indoor use. Lead-free X-Ray plasterboards replaces lead-containing boards in hospitals and contributes to a lead-free environment. Do not add water or any other substances to the product, it can affect the protection against X-Rays.

MATERIAL CONSUMPTION For joint filling on plasterboard:
approx. 0.3-0.4 l/m.

Product specification

Packaging:

10L plastic bucket

Materials	%
Filler Dolomite	20-40%
Filler Bariumsulfate	30-50-%
Water	20-40%
Binder	2,5-10%
Additive	1-3 %

Technical data:

Binding agent: Latex co-polymer

Solvent: Water

Grain size: Max. 0.20 mm

pH: Approx. 9

Colour: Yellow

Market:

Europe

Reference service life, product

Filler has a limited shelf life and is date-marked. Unopened packaging can be kept in a dark place, free from frost, for up to 12 months. Containers that have been opened must be sealed well.

Reference service life, building

Not part of the declaration.

LCA: Calculation rules

Declared unit:

1 kg Gypfill X-Ray Protection, Promix X-Ray Protection

Cut-off criteria:

All major raw materials and all the essential energy is included. The production processes for raw materials and energy flows with very small amounts (less than 1%) are not included. These cut-off criteria do not apply for hazardous materials and substances.

Data quality:

Specific data for the product composition are provided by the manufacturer. They represent the production of the declared product and were collected for EPD development in the year of study. Background data is based on registered EPDs according to EN 15804, Ostfold Research databases, ecoinvent and other LCA databases. The data quality of the raw materials in A1 is presented in the table below.

Materials	Source	Data quality	Year
Chemicals	Chemicals below cut-off	No data	0
Cellulose Ether	ecoinvent 3.4	Database	2017
Filler	ecoinvent 3.4	Database	2017
Packaging	ecoinvent 3.4	Database	2017
Water	ecoinvent 3.4	Database	2017
Packaging	Modified ecoinvent 3.4	Database	2017
Filler	ecoinvent 3.5	Database	2018

System boundary:

A1



A2



A3



A4

**Additional technical information:**

The product is tested by an independent institute "Radiation Metrology Group of Public Health England" for lead equivalents according to IEC 61331-1:2014.

Meets CE-marking requirements in accordance with EN 13963. Manufactured in accordance with ISO 9001 and ISO 14001.

When treating plasterboards, follow recommendations in accordance with EN 13963.

LCA: Scenarios and additional technical information

The following information describe the scenarios in the different modules of the EPD.

Transport from production place to user (A4)

Type	Capacity utilisation (incl. return) %	Type of vehicle	Distance km	Fuel/Energy consumption	Unit	Value (l/t)
Truck	55,0 %	Truck, lorry over 32 tonnes, EURO 5	300	0,022823	l/tkm	6,85
Railway					l/tkm	
Boat					l/tkm	
Other Transportation					l/tkm	

Assembly (A5)			Use (B1)		
.	Unit	Value	.	Unit	Value
Auxiliary	kg				
Water consumption	m ³				
Electricity consumption	kWh				
Other energy carriers	MJ				
Material loss	kg				
Output materials from waste treatment	kg				
Dust in the air	kg				
VOC emissions	kg				

Maintenance (B2)/Repair (B3)			Replacement (B4)/Refurbishment (B5)		
.	Unit	Value	.	Unit	Value
Maintenance cycle*			Replacement cycle*		
Auxiliary			Electricity consumption	kWh	
Other resources			Replacement of worn parts		
Water consumption	m ³		* Described above if relevant		
Electricity consumption	kWh				
Other energy carriers	MJ				
Material loss	kg				
VOC emissions	kg				

Operational energy (B6) and water consumption (B7)			End of Life (C1, C2)		
.	Unit	Value	.	Unit	Value
Water consumption	m ³		Hazardous waste disposed	kg	
Electricity consumption	kWh		Collected as mixed construction waste	kg	
Other energy carriers	MJ		Reuse	kg	
Power output of equipment	kW		Recycling		
			Energy recovery		
			To landfill	kg	

Transport to waste processing (C2)						
Type	Capacity utilisation (incl. return) %	Type of vehicle	Distance km	Fuel/Energy consumption	Unit	Value (l/t)
Truck					l/tkm	
Railway					l/tkm	
Boat					l/tkm	
Other Transportation					l/tkm	

LCA: Results

System boundaries (X=included, MND=module not declared, MNR=module not relevant)

Product stage				Construction installation stage	User stage							End of life stage				Beyond the system boundaries
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	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	MND	MND	MND

Environmental impact

Parameter	Unit	A1	A2	A3	A4
GWP	kg CO ₂ -eq	2,46E-01	1,10E-01	4,32E-03	2,62E-02
ODP	kg CFC11 -eq	1,92E-08	2,05E-08	6,19E-10	5,10E-09
POCP	kg C ₂ H ₄ -eq	1,34E-04	1,77E-05	1,62E-06	4,23E-06
AP	kg SO ₂ -eq	2,20E-03	3,56E-04	3,20E-05	8,51E-05
EP	kg PO ₄ ³⁻ -eq	4,39E-04	5,98E-05	1,58E-05	1,43E-05
ADPM	kg Sb -eq	1,66E-06	2,47E-07	1,81E-08	5,91E-08
ADPE	MJ	4,42E+00	1,72E+00	4,03E-02	4,11E-01

GWP Global warming potential; ODP Depletion potential of the stratospheric ozone layer; POCP Formation potential of tropospheric photochemical oxidants; AP Acidification potential of land and water; EP Eutrophication potential; ADPM Abiotic depletion potential for non fossil resources; ADPE Abiotic depletion potential for fossil resources

Reading example: 9,0 E-03 = 9,0*10⁻³ = 0,009

*INA Indicator Not Assessed

Resource use

Parameter	Unit	A1	A2	A3	A4
RPEE	MJ	8,92E-01	3,11E-02	2,61E-01	7,42E-03
RPEM	MJ	4,82E-01	0,00E+00	1,45E-04	0,00E+00
TPE	MJ	1,37E+00	3,11E-02	2,62E-01	7,42E-03
NRPE	MJ	5,06E+00	1,77E+00	4,28E-02	4,23E-01
NRPM	MJ	1,12E+00	0,00E+00	0,00E+00	0,00E+00
TRPE	MJ	6,17E+00	1,77E+00	4,28E-02	4,23E-01
SM	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00
W	m ³	6,33E-02	4,18E-04	4,85E-04	9,98E-05

RPEE Renewable primary energy resources used as energy carrier; RPEM Renewable primary energy resources used as raw materials; TPE Total use of renewable primary energy resources; NRPE Non renewable primary energy resources used as energy carrier; NRPM Non renewable primary energy resources used as materials; TRPE Total use of non renewable primary energy resources; SM Use of secondary materials; RSF Use of renewable secondary fuels; NRSF Use of non renewable secondary fuels; W Use of net fresh water

Reading example: 9,0 E-03 = $9,0 \cdot 10^{-3} = 0,009$

*INA Indicator Not Assessed

End of life - Waste

Parameter	Unit	A1	A2	A3	A4
HW	kg	4,10E-06	9,44E-07	1,69E-04	2,25E-07
NHW	kg	1,53E-01	1,61E-01	6,96E-03	3,84E-02
RW	kg	INA*	INA*	INA*	INA*

HW Hazardous waste disposed; NHW Non hazardous waste disposed; RW Radioactive waste disposed

Reading example: 9,0 E-03 = $9,0 \cdot 10^{-3} = 0,009$

*INA Indicator Not Assessed

End of life - Output flow

Parameter	Unit	A1	A2	A3	A4
CR	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MR	kg	0,00E+00	0,00E+00	7,61E-04	0,00E+00
MER	kg	0,00E+00	0,00E+00	9,79E-03	0,00E+00
EEE	MJ	INA*	INA*	INA*	INA*
ETE	MJ	INA*	INA*	INA*	INA*

CR Components for reuse; MR Materials for recycling; MER Materials for energy recovery; EEE Exported electric energy; ETE Exported thermal energy

Reading example: 9,0 E-03 = $9,0 \cdot 10^{-3} = 0,009$

*INA Indicator Not Assessed

Additional Norwegian requirements

Greenhouse gas emissions from the use of electricity in the manufacturing phase

National production mix from import, low voltage (production of transmission lines, in addition to direct emissions and losses in grid) of applied electricity for the manufacturing process (A3).

Electricity mix	Data source	Amount	Unit
Renewable electricity with Guarantee of Origin from LOS (kWh)	Modified ecoinvent 3.4	60,20	g CO ₂ -ekv/kWh

Dangerous substances

The product contains no substances given by the REACH Candidate list or the Norwegian priority list.

Indoor environment

Bibliography

ISO 14025:2010 Environmental labels and declarations - Type III environmental declarations - Principles and procedures.

ISO 14044:2006 Environmental management - Life cycle assessment - Requirements and guidelines.

EN 15804:2012+A1:2013 Environmental product declaration - Core rules for the product category of construction products.

ISO 21930:2017 Sustainability in buildings and civil engineering works. Core rules for environmental product declarations of construction products.





ecoinvent v3, Allocation, cut-off by classification, Swiss Centre of Life Cycle Inventories.

Iversen et al., (2018) eEPD v3.0 - Background information for EPD generator system, LCA.no report number 04.18

Iversen et al., (2019) EPD generator for Saint-Gobain Weber and Scanspac - Background information and LCA data, LCA.no report number 05.18

NPCR Part A: Construction products and services. Ver. 1.0. April 2017, EPD-Norge.

NPCR 009 Part B for technical-chemical products. Ver. 1.0 June 2018, EPD-Norge.

 epd-norge.no The Norwegian EPD Foundation	Program operator and publisher The Norwegian EPD Foundation Post Box 5250 Majorstuen, 0303 Oslo 0303 Oslo Norway	Phone: +47 97722020 e-mail: post@epd-norge.no web: www.epd-norge.no
	Owner of the declaration Saint-Gobain Sweden AB, Scanspac Kemivägen 7 SE-705 97 Glanshammar	Phone: +46 (0)19-46 34 00 Fax: e-mail: info@dalapro.se web: www.dalapro.se
	Author of the Life Cycle Assessment LCA.no AS Dokka 1C 1671 Kråkerøy	Phone: +47 916 50 916 Fax: e-mail: post@lca.no web: www.lca.no
	Developer of EPD generator LCA.no AS Dokka 1C 1671 Kråkerøy	Phone: +47 916 50 916 e-mail: post@lca.no web: www.lca.no