

Environmental Product Declaration

In accordance with ISO 14025 and EN 15804 for:

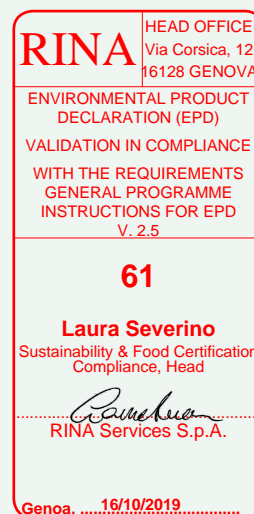
Supersil Light

from

Bifire srl



Programme:	The International EPD® System, www.environdec.com
Programme operator:	EPD International AB
EPD registration number:	S-P-01734
Publication date:	2019-11-14
Valid until:	2024-10-15
Geographical scope	Global



Programme information

Programme:	<p>The International EPD® System</p> <p>EPD International AB Box 210 60 SE-100 31 Stockholm Sweden</p> <p>www.environdec.com info@environdec.com</p>
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<p>Product category rules (PCR): <i>CONSTRUCTION PRODUCTS AND CONSTRUCTION SERVICES 2012:01, VERSION 2.3</i> sub PCR ACOUSTICAL SYSTEM SOLUTIONS (CONSTRUCTION PRODUCT) (v2.2) PCR 2012:01-SUB-PCR-C rev.16/11/2018</p>
<p>PCR review was conducted by: <i>The Technical Committee of the International EPD® System. Chair: Massimo Marino.</i> Contact via info@environdec.com</p>
<p>Independent third-party verification of the declaration and data, according to ISO 14025:2006:</p> <p><input type="checkbox"/> EPD process certification <input checked="" type="checkbox"/> EPD verification</p>
<p>Third party verifier: <i>Rina Services Spa</i></p> <p><i>In case of accredited certification bodies:</i> Accredited by: <i>Accredia, Accreditation n. 001H.</i></p>
<p>Procedure for follow-up of data during EPD validity involves third party verifier:</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>

The EPD owner has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different programmes may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804.

Company information

Owner of the EPD: Bifire srl, Via Laboratori Autobianchi, 1, 20832 Desio (MB), tel: +39 0362 364570 – mail: bifire@bifire.it

Description of the organisation: BIFIRE®, leader in the production of products for fire protection in construction, industry and marine, offers advantageous technological solutions through a wide mix of products, which constitute a "cut" proposal exactly on the needs of individual customers.

Product-related or management system-related certifications:

- Occupational Health and Safety Management System according to OHSAS 18001: OHS-2399
- Quality Management System according to ISO 9001: 7690/02/S
- Environmental Management System according to ISO 14001: EMS-5106/AN

Name and location of production site:

- via Bergamo 16, 20037 Paderno Dugnano (MI): Supersil production site.

Product information

Supersil Light

Product identification: slabs for fire protection and soundproofing in construction

Product description:

SUPERSIL Light is a high density calcium fiber silicate totally free of asbestos composed of silicates, cement, fibers and inert additives.

It is available in 24 mm thicknesses.

SUPERSIL sheets are treated in an autoclave, making the finished product totally stable in the event of fire, incombustible (class A1), and guaranteeing high mechanical strength and resistance to atmospheric humidity.

SUPERSIL is supplied in rigid self-supporting panels with mechanical stability, flexibility, abrasion resistance and excellent heat performance.

Its high mechanical strength allows it to be used in the most severe conditions within its operating temperatures.

UN CPC code: 375 Articles of concrete, cement and plaster

Geographical scope: Global

Technical data		Supersil Light
Dry density	[kg/m ³]	550
Width	[mm]	1200
Length	[mm]	2000
Thickness	[mm]	24
Weight	[kg/m ²]	13,2
Reaction to fire	-	A1
Soundproofing power Rw (single slab)	dB	34

LCA information

Declared unit: 1 m² of product

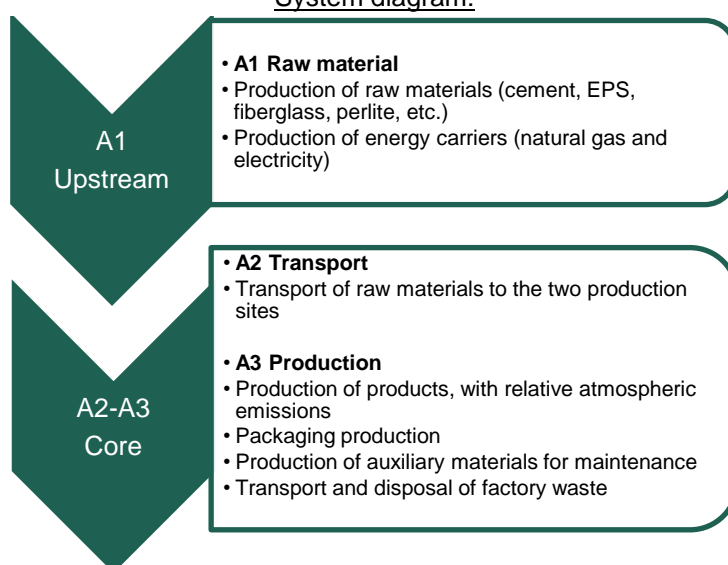
Sima pro 9.0

Time representativeness: the data refer to the year 2018.

Description of system boundaries: Type of EPD: cradle to gate

Database(s) and LCA software used:
ecoinvent v. 3.5, November 2018.

System diagram:



Excluded lifecycle stages: the study is limited to the factory gate, as the subsequent phases are optional.

More information:

A 1% cut-off was used, in terms of environmental relevance.

In cut off were considered:

- the labels affixed to the products during shipment;
- general office consumption;
- packaging of packaging materials.

Specific energy consumption per production line was used in the study.

The specific consumption of natural gas per slab is significantly higher than the other products as the increase in thickness requires more energy to reach the core of the product and cook it.

Maintenance and atmospheric emissions are also line specific.

Name and contact information of LCA practitioner: LCA study was carried out by e3 studio associato di consulenza, info@ecubo.it

Content declaration

Supersil Light

Materials / chemical substances	%	Environmental / hazardous properties
Portland cement	4-12%	H315, H318, H317, H335
Expanded perlite	10-15%	-
Glass fiber	1,3-1,8%	-
Calcium-based mineral	70-80%	-
Glass fiber mesh	0,3-0,65 %	-
Glass fiber matte	0,3-0,65 %	-

The product doesn't contain substances listed in the "Candidate List of Substances of Very High Concern for Authorisation over 0,1%.

Packaging

Consumer and distribution packaging: the product is distributed on pallets, packaged with cardboard corners and metal straps.

Recycled material

In the product there isn't recycled material.

Environmental performance: Supersil Light

Potential environmental impact

1 m ² Supersil Light 24 mm	UNIT	A1	A2	A3	TOTAL
Global Warming potential (GWP)	kg CO ₂ eq	6,45	0,19	3,70	10,3
Photochemical oxidant creation potential	kg C ₂ H ₄ eq	1,74E-03	3,03E-05	9,03E-05	1,86E-03
Photochemical oxidant creation potential	Kg NMVOC	0,0210	0,0010	0,0016	0,0236
Acidification potential (AP)	kg SO ₂ eq	0,0332	0,0007	0,0009	0,0348
Eutrophication potential (EP)	kg PO ₄ ... eq	8,07E-03	1,70E-04	2,78E-04	8,52E-03
Depletion potential of the stratospheric ozone layer (ODP)	kg CFC-11 eq	1,01E-06	3,58E-08	6,18E-09	1,05E-06
Abiotic depletion potential – Elements	kg Sb eq	9,55E-06	3,59E-07	3,89E-07	1,03E-05
Abiotic depletion potential – Fossil resources	MJ	126	3	1	129

Use of resources

1 m² Supersil Light 24 mm		UNIT	A1	A2	A3	TOTAL
Primary energy resources – Non Renewable	Use as energy carrier	MJ, net calorific value	133	3	1	137
	Used as raw materials	MJ, net calorific value	0	0	0	0
	TOTAL	MJ, net calorific value	133	3	1	137
Primary energy resources – Renewable	Use as energy carrier	MJ, net calorific value	13	0	0	13
	Used as raw materials	MJ, net calorific value	0	0	1	1
	TOTAL	MJ, net calorific value	13	0	1	15
Secondary material		kg	0	0	0	0
Renewable secondary fuels		MJ, net calorific value	0	0	0	0
Non-renewable secondary fuels		MJ, net calorific value	0	0	0	0
Net use of fresh water		m³	13,6	13,7	0,2	0,3

Waste production

1 m ² Supersil Light 24 mm	UNIT	A1	A2	A3	TOTAL
Hazardous waste disposed	kg	1,4E-04	1,7E-06	1,2E-06	1,4E-04
Non-hazardous waste disposed	kg	0,40	0,25	0,02	0,66
Radioactive waste disposed	kg	2,0E-04	2,0E-05	3,5E-06	2,3E-04

Additional information

Emission of Volatile Organic Compounds (VOC) using testing chamber method according to standard UNI EN ISO 16000-9:2006 and classification "Décret n° 2011-321 du 23 mars 2011" and "Arrêté del 19/04/2011"):

- *Supersil Light: Emission class A+ (TEST REPORT No.344611 Istituto Giordano)*

References

General Programme Instructions of the International EPD® System. Version 2.5., CONSTRUCTION PRODUCTS AND CONSTRUCTION SERVICES, 2012:01, VERSION 2.3

Rapporto LCA Bifire rev.2, 07/10/2019

ecoinvent v. 3.5, November 2018, www.ecoinvent.org

