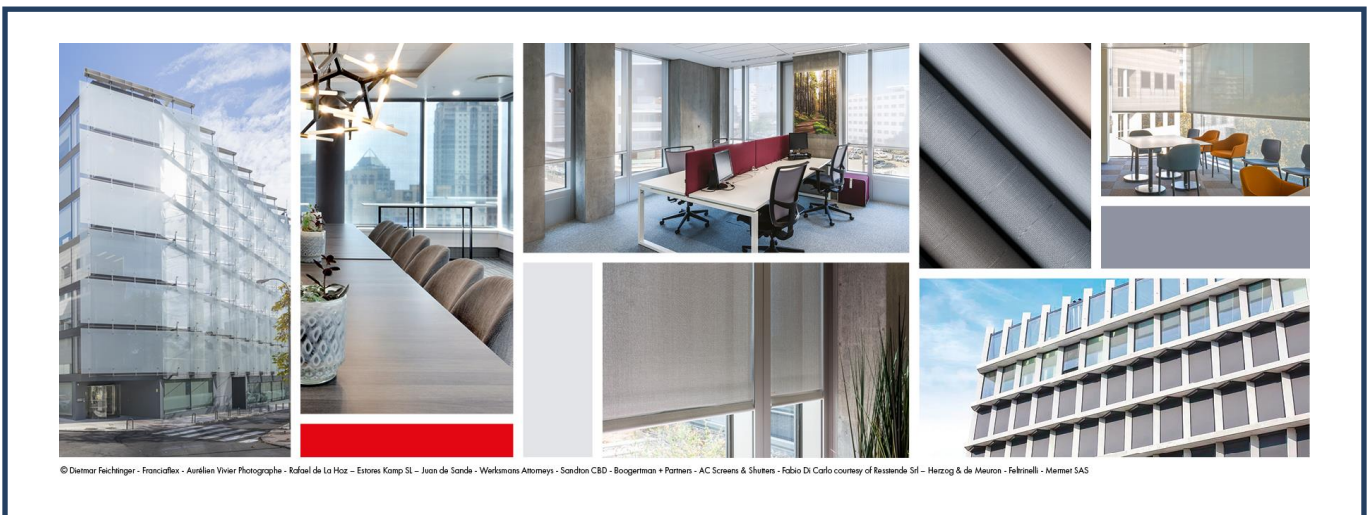


FRENCH ENVIRONMENTAL PRODUCT DECLARATION (EPD)

Sunscreen® transparent technical fabrics for exterior and interior sun protection, including confection

*Environmental product declaration in accordance with standards NF EN ISO 14025, NF EN 15804+A1
and its French national complement NF EN 15804/CN, ISO 14040 and ISO 14044*

January 2022



EPD Version: 1.0

INIES Registration number: 0289382102022



REALISATION:

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Attention

The information contained in this declaration is provided under the responsibility of Mermet owner of this EPD) according to the NF EN 15804+A1 and the French national complement NF EN 15804/CN.

Any exploitation, total or partial, of the information provided in this document should at least be accompanied by a reference to the complete original EPD as well as to the owner of the declaration who can provide a copy of the full EPD.

It is reminded that the results of this study are based purely on facts, scenarios and hypotheses which have been provided for this study. If any of these facts, scenarios or hypotheses should change, the results of this study are also liable to change.

Additionally, the results of this study should be considered in their entirety, with the appropriate hypotheses, and not taken individually.

The norm EN 15804+A1 of the CEN serves as the Product Category Rules (PCR) for this study.

Reading Guide

The inventory data respects the requirements of the norm EN 15804+A1.
In the following tables, 2.53E-06 should be read as 2.53×10^{-6} (scientific notation).

The units used are specified for each flow, and are as follows:

- kilogram « kg » ,
- cubic metre « m³ » ,
- kilowatt-hour « kWh » ,
- mega joule « MJ »
- square metre « m² » .

Abbreviations:

- LCA: Life Cycle Analysis
- RSL: Reference Service Life
- CF: Characterization Factor
- DU: Declared Unit
- LHV: Lower Heating Value

Precautions for the use of EPDs as a method of comparing products

EPDs for construction products created in conformance with the norm EN 15804+A1 should only be compared with EPDs likewise created in conformance with the same norm.

The norm EN 15804+A1 specifies in chapter 5.3, "Comparability of EPD for construction products", the conditions under which construction products may be compared, based on information provided in the EPD:

"In principle the comparison of products on the basis of their EPD is defined by the contribution they make to the environmental performance of the building. Consequently, comparison of the environmental performance of construction products using the EPD information shall be based on the product's use in and its impacts on the building, and shall consider the complete life cycle (all information modules)."

SUMMARY

1	Introduction.....	4
2	General Information.....	5
3	Description of the declared unit and the product.....	6
4	Life cycle stages.....	7
4.1	Production stages, A1-A3.....	7
4.2	Construction stages, A4-A5.....	7
4.3	Use stages (potential savings excluded), B1-B7.....	7
4.4	End of Life stages, C1-C4.....	8
4.5	Potential for recycling/re-use/recovery, D.....	8
5	Information for the life cycle analysis calculation.....	9
6	Life Cycle Analysis results.....	10
7	Additional Information on the release of hazardous substances into indoor air, soil and water during the period of use.....	15
8	Product contribution to the quality of life in an indoor environment.....	16

1 INTRODUCTION

The format used to present this environmental product declaration is based on the French national complement NF EN 15804/CN and the INIES program.

An accompanying report for this declaration has been produced and is available for consultation, under confidentiality clauses, at the MERMET SAS headquarters.



The information contained in this document has been provided under the responsibility of MERMET SAS.

Contact:
Eric BŒGLIN

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2 GENERAL INFORMATION

1. Manufacturer name and address:
 MERMET SAS
 58, Chemin du Mont Maurin
 38630 LES AVENIERES VEYRINS-THUELLIN
 FRANCE
2. Manufacturing site for which the EPD is representative: MERMET SAS - LES AVENIERES VEYRINS-THUELLIN
3. Type of EPD: " from cradle to gate, with options "
4. Type of EPD: Individual
5. Publication date: January 2022
6. Valid until: January 2027
7. Commercial reference/product ID:
 The commercial references covered by this EPD are listed below:
 - SCREEN VISION: SV 1%, SV 3%, SV 5%, SV 10%
 - SCREEN DESIGN: M-SCREEN 8501, M-SCREEN 8503, M-SCREEN 8505
 - SCREEN THERMIC: S2 1%, S2 3%, S2 5%
 - EXTERNAL SCREEN CLASSIC: SATINE 5500, SATINE 5501, NATTE 4503, ULTRAVISION
 - ACOUSTICS: ACOUSTIS® 50
8. Verification :

The norm EN 15804 of the CEN serves as PCR a).	
Independent verification of the declaration, in conformity with EN ISO 14025:2010 b)	
<input type="checkbox"/> internal <input checked="" type="checkbox"/> external	
(Case b)) Independent verification:	
<p>Verification program: FDES-INIES http://www.inies.fr/</p> <div style="text-align: center;">  Association HQE 4, avenue du Recteur Poincaré 75016 PARIS FRANCE </div>	<p>Reviewer: Clément HELIAS (chelias@esteana.fr)</p> <div style="text-align: center;">  Esteana 26 rue Mège 83220 Le Pradet FRANCE </div>
<p>a) Product Category Rules b) Facultative for communication between companies, obligatory for communication between companies and their clients (see EN ISO 14025:2010, 9.4).</p>	

9. Production site: The products covered by this French EPD are produced in France, on the Veyrins-Thuellin site (Isère). This French EPD takes into account the manufacturing of the fabrics all over Europe.
10. Distribution channel: BtoB

3 DESCRIPTION OF THE DECLARED UNIT AND THE PRODUCT

11. Description of the declared unit:

« 1 m² of semi-finished technical fabric for solar protection, for indoor or outdoor use, including confection, based on a Reference Service Life of 15 years »

12. Product description: MERMET SAS technical fabrics for solar protection are used in solar protection finished products, such as blinds (roll-up, ZIP, roman shades, Projection shades for example).

13. Description of the product use (area of application): The products are used as indoor or outdoor solar protection.

14. Main performance of the functional unit: Not concerned.

15. Other technical characteristics not included in the functional unit: Not concerned.

For further information, the technical characteristics (mechanical resistance and others) of the products are available in the product data sheets from the manufacturer's website: <https://www.sunscreen-mermet.fr/>

16. Description of the principal components and materials of the product:

Parameter	Unit	Value
Product quantity	kg/m ²	4,96E-01
Main components	kg/m ²	Glass fibre: in majority Binder: in majority Flame retardant: in minority Pigment: in minority Others: in minority
Complementary products quantity	kg/m ²	-
Distribution packaging	kg/m ²	Cardboard box: 2,19E-02 Cardboard roll: 5,81E-02 PE Film: 3,72E-03 Pallet: 3,96E-02
Installation waste rate	%	Not concerned
Maintenance waste rate	%	0%
Justification for the information provided	-	All information is provided by MERMET SAS.

17. Specify if the product contains substances featured on the Candidate List from the REACH regulations (if greater than 0.1% by mass of the total product):

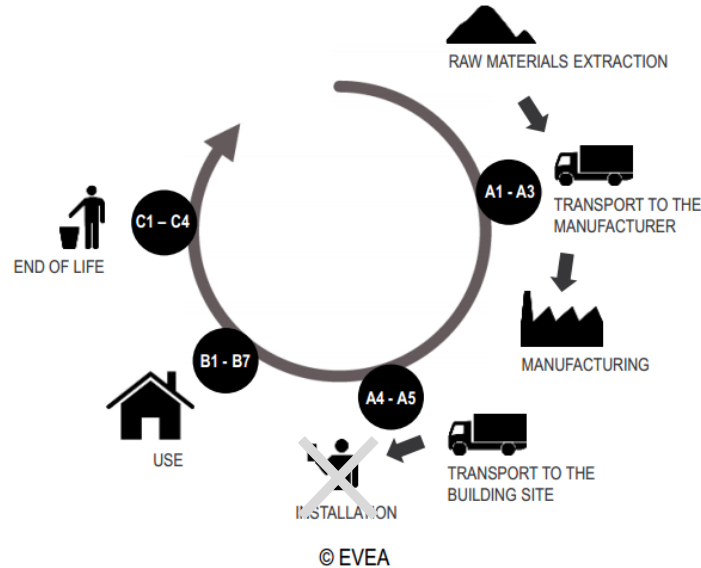
The product does not contain substances featured on the Candidate List from the REACH regulations greater than 0.1% by mass of the total product.

18. Description of the Reference Service Life (if applicable and in conformance with §7.2.2 of the NF EN 15804+A1)

Parameter	Unit	Valeur
Reference Service Life	Years	15 Products that are declared in this document have a Reference Service Life of at least 20 years for indoor applications.
Declared properties of the product at the factory gate	-	In compliance with the quality control conducted by MERMET SAS when the product comes out of the factory.
Theoretical application parameters	-	-
Assumed quality of work	-	The products must be applied in accordance with MERMET SAS recommendations for the finished product manufacturing or the installation.
Exterior environment	-	The products must be used in environments in accordance with MERMET SAS recommendations.
Interior environment	-	
Conditions of use	-	The use of the products is assumed to be in accordance with MERMET SAS recommendations.

4 LIFE CYCLE STAGES

Diagram of the product life-cycle:



4.1 Production stages, A1-A3

The glass fibres are coated, warped, woven and then heat-treated to manufacture technical fabrics. They are then controlled and sent to manufacturers of blinds equipped with the right tools to cut them and make the finished products.

4.2 Construction stages, A4-A5

Transport to installation site:

Parameter	Unit	Value
Scenario description	-	The finished products are transported to the installation site over 712 km by truck.
Type of fuel and vehicle consumption or type of vehicle	-	The vehicles considered are Euro 5 trucks with a useful load of 16-32 tons.
Distance to installation site	km	712
Capacity used	%	36 (empty returns included)
Volumetric mass of transported product	kg/m ³	Depends on the product
Volumetric capacity utilization coefficient	-	<1

Installation in the building:

Not concerned and excluded out of the system limits.

4.3 Use stages (potential savings excluded), B1-B7

B1 Use:

No emission is considered for the use stage.

B2 Maintenance:

Parameters	Units	Values/descriptions
Scenario description		It is planned to clean periodically by washing with water every 5 years.
Maintenance frequency	years	5
Pure water consumption	L/m ² /reference service life	1,00E+01 L/m ² every 5 years, that is to say 3,00E+01 L/m ² for the estimated reference service life of 15 years

B3 Repair:

No repair planned on the reference service life.

B4 Replacement :

No replacement planned on the reference service life

B5 Refurbishment:

No rehabilitation planned on the reference service life.

B6 – B7 Use of energy and water:

The products do not consume energy or water on the reference service life.

4.4 End of Life stages, C1-C4

Parameter	Unit	Value/Description
Scenario description		The fabrics are transported over 130km to be landfilled.
Quantity collected separately	kg	-
Quantity collected with mixed construction waste	kg	4,96E-01
Quantity destined for reuse	kg	-
Quantity for recycling	kg	-
Quantity for energy recovery	kg	-
Quantity of landfill wastes	kg	4,96E-01

4.5 Potential for recycling/re-use/recovery, D

Not declared

5 Information for the life cycle analysis calculation

PCR used	NF EN 15804+A1:2014 and NF EN 15804/CN:2016.
System limits	<p>The limits of the system respect the requirements of the norm NF EN 15804+A1 and the French national complement NF EN 15804/CN.</p>
Cut-off rule	The product packaging after confection has been integrated to the cut-off rule, in accordance to the NF EN 15804+A1 and NF EN 15804/CN mandatory rules
Allocations	Surface
Geographical and temporal representation of the primary data	<p>Generic data is provided by the ecoinvent v3.7 database (2020). Manufacturer data is based on a collect performed for the year 2020.</p> <p>Software used:</p> <p>SimaPro - SimaPro, Life Cycle Analysis software (version 9).</p> <p>evDEC - Ev-DEC, (www.ev-dec.com), developed by the consultancy company EVEA (www.evea-conseil.com), which aids in the creation of EPDs.</p>
Variability of the results	<p>This EPD cover multiple references. Thus, a variability analysis has been conducted. The impacts of the considered references are homogenous, so the impacts declared in this EPD are based on an average product.</p> <p>The maximal difference in impact in comparison to the average product (declared product) is of 12% (mandatory indicators tested in the French national complement NF EN15804+A1/CN for collective EPD.</p>

6 LIFE CYCLE ANALYSIS RESULTS

Environmental Impacts	Fabrication stage			Installation stage		Use stage							End of Life stage				D Benefits and impacts beyond the system limits
	A1 Raw material supply	A2 Transport	A3 Fabrication	A4 Transport	A5 Installation	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Use of energy	B7 Use of water	C1 Deconstruction/ demolition	C2 Transport	C3 Waste treatment	C4 Elimination	
Global Warming Potential kg CO2 eq/DU	1,35E+00	1,01E-01	2,05E+00	7,24E-02	NC	0,00E+00	2,38E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,44E-03	0,00E+00	2,80E-02	N.C
Depletion potential of the stratospheric ozone layer kg CFC 11 eq/DU	2,84E-06	1,79E-08	9,54E-07	1,32E-08	NC	0,00E+00	1,62E-09	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,44E-10	0,00E+00	2,73E-09	N.C
Acidification Potential of soil and water kg SO2 eq/DU	7,63E-03	8,83E-04	7,79E-03	2,27E-04	NC	0,00E+00	1,65E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,65E-06	0,00E+00	7,53E-05	N.C
Eutrophication Potential kg (PO4)3- eq/DU	1,06E-03	1,09E-04	1,27E-03	3,76E-05	NC	0,00E+00	3,82E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,27E-06	0,00E+00	2,93E-04	N.C
Formation potential of tropospheric ozone kg Ethene eq/DU	9,96E-04	8,25E-05	9,83E-04	3,70E-05	NC	0,00E+00	1,43E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,25E-06	0,00E+00	7,38E-05	N.C
Abiotic depletion potential – non-fossil (ADP-elements) kg Sb eq/DU	7,53E-03	3,55E-07	2,16E-03	3,00E-07	NC	0,00E+00	2,97E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,01E-08	0,00E+00	7,10E-08	N.C
Abiotic depletion potential – fossil (ADP-fossil fuels) MJ PCI/DU	2,52E+01	1,46E+00	3,14E+01	1,08E+00	NC	0,00E+00	2,47E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,65E-02	0,00E+00	2,34E-01	N.C
Water Pollution m3/DU	8,93E-01	3,65E-02	1,07E+00	2,69E-02	NC	0,00E+00	1,38E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,06E-04	0,00E+00	4,44E-02	N.C
Air Pollution m3/DU	3,62E+02	1,20E+01	2,10E+02	7,43E+00	NC	0,00E+00	4,09E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,51E-01	0,00E+00	2,35E+00	N.C

N.C: Not concerned

Resource use	Fabrication stage			Installation stage		Use stage							End of Life stage				D Benefits and impacts beyond the system limits
	A1 Raw material supply	A2 Transport	A3 Fabrication	A4 Transport	A5 Installation	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Use of energy	B7 Use of water	C1 Deconstruction/ demolition	C2 Transport	C3 Waste treatment	C4 Elimination	
Use of renewable primary energy excluding the renewable primary energy resources used as raw materials MJ PCI/DU	2,15E+00	1,78E-02	4,27E+00	1,49E-02	NC	0,00E+00	3,95E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,03E-04	0,00E+00	1,91E-02	N.C
Use of renewable primary energy resources used as raw materials MJ PCI/DU	6,59E-01	0,00E+00	2,49E+00	0,00E+00	NC	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	N.C
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials) MJ PCI/DU	2,81E+00	1,78E-02	6,76E+00	1,49E-02	NC	0,00E+00	3,95E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,03E-04	0,00E+00	1,91E-02	N.C
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials MJ PCI/DU	2,14E+01	1,49E+00	5,36E+01	1,11E+00	NC	0,00E+00	3,41E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,73E-02	0,00E+00	2,57E-01	N.C
Use of non-renewable primary energy resources used as raw materials MJ PCI/DU	7,51E+00	0,00E+00	5,11E+00	0,00E+00	NC	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	N.C
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials) MJ PCI/DU	2,89E+01	1,49E+00	5,87E+01	1,11E+00	NC	0,00E+00	3,41E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,73E-02	0,00E+00	2,57E-01	N.C
Use of secondary materials kg/DU	0,00E+00	0,00E+00	0,00E+00	0,00E+00	NC	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	N.C
Use of renewable secondary fuels MJ PCI/DU	0,00E+00	0,00E+00	0,00E+00	0,00E+00	NC	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	N.C
Use of non-renewable secondary fuels MJ PCI/DU	0,00E+00	0,00E+00	0,00E+00	0,00E+00	NC	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	N.C
Net use of fresh water resources m3/DU	1,61E-02	3,15E-05	2,56E-02	3,27E-05	NC	0,00E+00	3,25E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,10E-06	0,00E+00	1,78E-04	N.C

N.C: Not concerned

Waste categories	Fabrication stage			Installation stage		Use stage							End of Life stage				D Benefits and impacts beyond the system limits
	A1 Raw material supply	A2 Transport	A3 Fabrication	A4 Transport	A5 Installation	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Use of energy	B7 Use of water	C1 Deconstruction/ demolition	C2 Transport	C3 Waste treatment	C4 Elimination	
Hazardous waste disposed kg/DU	8,26E-02	1,06E-03	8,56E-02	7,50E-04	NC	0,00E+00	2,71E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,53E-05	0,00E+00	6,91E-04	N.C
Non-hazardous waste disposed kg/DU	1,10E+00	6,81E-02	9,91E-01	6,19E-02	NC	0,00E+00	3,16E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,09E-03	0,00E+00	5,04E-01	N.C
Radioactive waste disposed kg/DU	6,56E-05	1,02E-05	4,28E-04	7,58E-06	NC	0,00E+00	1,74E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,56E-07	0,00E+00	1,82E-06	N.C

N.C: Not

concerned



Output flows		Fabrication stage			Installation stage		Use stage							End of Life stage				D Benefits and impacts beyond the system limits		
		A1 Raw material supply	A2 Transport	A3 Fabrication	A4 Transport	A5 Installation	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Use of energy	B7 Use of water	C1 Deconstruction/ demolition	C2 Transport	C3 Waste treatment	C4 Elimination			
Components for re-use kg/DU		0,00E+00	0,00E+00	4,44E-02	0,00E+00	NC	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	N.C	
Materials for recycling kg/DU		0,00E+00	0,00E+00	6,51E-02	0,00E+00	NC	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	N.C
Materials for energy recovery kg/DU		0,00E+00	0,00E+00	0,00E+00	0,00E+00	NC	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	N.C
Exported energy MJ/DU	Electricity	0,00E+00	0,00E+00	0,00E+00	0,00E+00	NC	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	N.C
	Vapor	0,00E+00	0,00E+00	0,00E+00	0,00E+00	NC	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	N.C
	Gas	0,00E+00	0,00E+00	0,00E+00	0,00E+00	NC	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	N.C

N.C : Not concerned

Impact category/flow	Unit	Total Fabrication	Total Installation	Total Use	Total End of Life	Total Life Cycle
Global Warming Potential	kg CO2 eq/DU	3,50E+00	7,24E-02	2,38E-02	3,05E-02	3,62E+00
Depletion potential of the stratospheric ozone layer	kg CFC 11 eq/DU	3,81E-06	1,32E-08	1,62E-09	3,17E-09	3,83E-06
Acidification Potential of soil and water	kg SO2 eq/DU	1,63E-02	2,27E-04	1,65E-04	8,30E-05	1,68E-02
Eutrophication Potential	kg (PO4)3- eq/DU	2,44E-03	3,76E-05	3,82E-04	2,95E-04	3,15E-03
Formation potential of tropospheric ozone	kg Ethene eq/DU	2,06E-03	3,70E-05	1,43E-05	7,51E-05	2,19E-03
Abiotic depletion potential – non-fossil (ADP-elements)	kg Sb eq/DU	9,69E-03	3,00E-07	2,97E-07	8,11E-08	9,69E-03
Abiotic depletion potential – fossil (ADP-fossil fuels)	MJ PCI/DU	5,81E+01	1,08E+00	2,47E-01	2,71E-01	5,97E+01
Water Pollution	m3/DU	2,00E+00	2,69E-02	1,38E-01	4,53E-02	2,21E+00
Air Pollution	m3/DU	5,83E+02	7,43E+00	4,09E+00	2,60E+00	5,97E+02
Use of renewable primary energy excluding the renewable primary energy resources used as raw materials	MJ PCI/DU	6,43E+00	1,49E-02	3,95E-02	1,96E-02	6,51E+00
Use of renewable primary energy resources used as raw materials	MJ PCI/DU	3,15E+00	0,00E+00	0,00E+00	0,00E+00	3,15E+00
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ PCI/DU	9,58E+00	1,49E-02	3,95E-02	1,96E-02	9,65E+00
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	MJ PCI/DU	7,65E+01	1,11E+00	3,41E-01	2,94E-01	7,82E+01
Use of non-renewable primary energy resources used as raw materials	MJ PCI/DU	1,26E+01	0,00E+00	0,00E+00	0,00E+00	1,26E+01
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ PCI/DU	8,91E+01	1,11E+00	3,41E-01	2,94E-01	9,08E+01
Use of secondary materials	kg/DU	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of renewable secondary fuels	MJ PCI/DU	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of non-renewable secondary fuels	MJ PCI/DU	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh water resources	m3/DU	4,17E-02	3,27E-05	3,25E-03	1,79E-04	4,52E-02
Hazardous waste disposed	kg/DU	1,69E-01	7,50E-04	2,71E-03	7,17E-04	1,73E-01
Non-hazardous waste disposed	kg/DU	2,15E+00	6,19E-02	3,16E-02	5,06E-01	2,75E+00
Radioactive waste disposed	kg/DU	5,04E-04	7,58E-06	1,74E-06	2,07E-06	5,15E-04
Components for re-use	kg/DU	4,44E-02	0,00E+00	0,00E+00	0,00E+00	4,44E-02
Materials for recycling	kg/DU	6,51E-02	0,00E+00	0,00E+00	0,00E+00	6,51E-02
Materials for energy recovery	kg/DU	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy (electricity)	MJ/DU	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy (vapor)	MJ/DU	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy (gas)	MJ/DU	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Table of life cycle assessment results posted in accordance with Decree No. 2013-1264 of December 23, 2013¹

¹ Decree No. 2013-1264 of 23 December 2013 on the environmental declaration of certain construction products intended for use in building works

7 ADDITIONAL INFORMATION ON THE RELEASE OF HAZARDOUS SUBSTANCES INTO INDOOR AIR, SOIL AND WATER DURING THE PERIOD OF USE

		Results	Report
Emission to indoor air ^{1 2}	VOC and formaldehyde emissions		
	Behaviour against fungal and bacterial growth	ASTM E 2180-07-	-
	Natural radioactive emissions from construction products	-	-
	Fibre and particle emissions	-	-
Emission to soil and water ^{1 2}	Emissions into water	-	-
	Emissions into the soil	-	-

1) Emissions to indoor air, soil and water according to horizontal norms for the measurement of emissions of regulated hazardous substances from construction products using harmonised test methods in accordance with the provisions of the respective Technical Committees of the European Product Standards. where available.

For more information. refer to the EeB Guide: <http://www.eebguide.eu/?p=1991>

2) In France. the INIES Base Technical Committee (CTIB) gives recommendations on the declaration of health and comfort characteristics - Guide to writing health and comfort summaries (CTIB N94, June 2018)

8 PRODUCT CONTRIBUTION TO THE QUALITY OF LIFE IN AN INDOOR ENVIRONMENT

Product characteristics contributing to the hygrothermic comfort of the building:

The products contribute to the hygrothermic comfort in the building through their solar protection characteristics.

Product Range EXTERNAL SCREEN CLASSIC	Minimum Solar Factor Exterior g_{tot} glass D ISO EN 52022-3	% of solar heat stopped	Thermal Comfort Class EN14501-2021
Natté 4503	0,04	96%	4
Satiné 5501	0,02	98%	4
Satiné 5500	0,035	97%	4

Product range SCREEN THERMIC - SCREEN DESIGN - SCREEN VISION	Minimum Solar Factor Exterior g_{tot} glass D ISO EN 52022-3	% of solar heat stopped	Thermal Comfort Class EN14501-2021
S2 1%	0,13	87%	3
S2 3%	0,14	86%	3
SV 1%	0,13	87%	3
SV 3%	0,13	87%	3
M-Screen 8505	0,14	86%	3
M-Screen 8503	0,125	88%	3
M-Screen 8501	0,13	87%	3

Maximum classes according to EN ISO 14501-2021 depending on the color

Values measured in internal tests - controlled by the European Solar Shading Organization

0	very little effect / très peu d'effet
1	little effect / peu d'effet
2	moderate effect / effet moyen
3	good effect / bon effet
4	very good effect / très bon effet

The thermal factors for each product are available on the MERMET SAS website.

Product characteristics contributing to the acoustic comfort of the building:

The products contribute to the acoustic comfort in the building through their openness factors: the more the fabric is closed, the more efficient it is.

The test reports (standard ISO 354) are available on request from MERMET SAS for the following products: ACOUSTIS® 50, SV 1%, SV 3%, M-SCREEN 8501, and the S2 1%. For example, the sound absorption coefficient α_w ranges from 0,1 to 0,7 depending on the assembly and the fabric.

Product characteristics contributing to the visual comfort of the building:

The products contribute to the visual comfort in the building through their solar protection characteristics, and the choice of the color.

Product range EXTERNAL SCREEN CLASSIC	Glare control	Use of natural light	View to the outside	Privacy at night
Natté 4503	3	2	2	2
Satiné 5501	3	2	2	2
Satiné 5500	1	2	3	2

Product range SCREEN THERMIC - SCREEN DESIGN - SCREEN VISION - ACOUSTICS	Glare control	Use of natural light	View to the outside	Privacy at night
S2 1%	3	2	2	2
S2 3%	2	2	2	2
S2 5%	1	2	1	2
SV 1%	3	2	2	2
SV 3%	3	2	2	2
SV 5%	0	2	3	1
SV 10%	0	2	4	1
M-Screen 8505	1	2	3	2
M-Screen 8503	3	2	2	2
M-Screen 8501	4	2	2	2
Acoustis ®	4	2	2	2

(Maximum classes according to EN ISO 14501-2021 depending on the color)

Values measured in internal tests - controlled by the European Solar Shading Organization

The optical factors for each product are available on the MERMET SAS website.

Product characteristics involved in creating olfactive comfort conditions in the building:

The product does not contribute to the overall air-quality in the building