



# SOPRASEAL STICK VP

## Self-Adhesive Air Barrier Membrane



**SOPREMA Inc.**

## ENVIRONMENTAL PRODUCT DECLARATION

ISO 14025:2006 and ISO 21930:2017



ASTM INTERNATIONAL

SOPREMA is pleased to present this Environmental Product Declaration (EPD) for the SOPRASEAL STICK VP. This EPD was developed in compliance with ISO 14025 and ISO 21930 and has been verified by Lindita Bushi, Ph.D., Athena Sustainable Materials Institute.

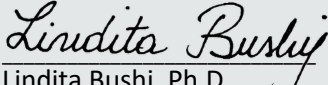
The LCA and the EPD were prepared by Vertima Inc. The EPD includes cradle-to-gate life cycle assessment (LCA) results.

For more information about SOPREMA, visit [www.soprema.ca](http://www.soprema.ca).

For any explanatory material regarding this EPD, please contact the program operator.

# 1. GENERAL INFORMATION

PCR GENERAL INFORMATION			
<b>Reference PCR</b>	Water-Resistive and Air Barriers ASTM International September 2017 to September 2023 (validity period)		
<b>The PCR review was conducted by:</b>	<i>Thomas P. Gloria (chair)</i> Industrial Ecology Consultants <a href="mailto:t.gloria@industrial-ecology.com">t.gloria@industrial-ecology.com</a>	<i>Graham Finch</i> RDH Building Science, Inc.	<i>Paul H. Shipp</i> USG Corporation

EPD GENERAL INFORMATION			
<b>Program Operator</b>	ASTM International 100 Barr Harbor Drive, West Conshohocken, PA 19428 <a href="http://www.astm.org">www.astm.org</a>		
<b>Declared Product</b>	SOPRASEAL STICK VP		
<b>EPD Registration Number</b> EPD 512	<b>EPD Date of Issue</b> July 20, 2023	<b>EPD Period of Validity</b> July 19, 2028	
<b>EPD Recipient Organization</b>	SOPREMA Inc. 1688, Jean-Berchmans-Michaud Drummondville (Quebec) J2C 8E9 Canada <a href="http://www.soprema.ca">www.soprema.ca</a>		
<b>EPD Type/Scope and Declared Unit</b> Product specific cradle-to-gate EPD with declared unit of 1 m <sup>2</sup> of membrane			<b>Year of Reported Manufacturer Primary Data</b> 2021
<b>Geographical Scope</b> North America	<b>LCA Software</b> OpenLCA v.1.11.0	<b>LCI Databases</b> Ecoinvent 3.9.1 and US LCI	<b>LCIA Methodology</b> TRACI 2.1, CED LHV v1.0 and HHV v.1.01
This LCA and EPD were prepared by:		Chantal Lavigne, M.A Sc Vertima Inc. <a href="http://www.vertima.ca">www.vertima.ca</a>	
This EPD and LCA were independently verified in accordance with ISO 14025:2006, ISO 14040:2006, ISO 14044:2006 and ISO 21930:2017, as well as the ASTM International PCR "Water-Resistive and Air Barriers." <input type="checkbox"/> Internal <input checked="" type="checkbox"/> External		 Lindita Bushi, Ph.D. Athena Sustainable Materials Institute	

## LIMITATIONS

Environmental declarations from different programs (ISO 14025) may not be comparable.[1]

Furthermore, *“comparison of construction products using an EPD shall be carried out in the context of the construction works. Consequently, comparisons of the environmental performance of construction products using the EPD shall consider all the relevant information modules over the full life cycle of the products within the construction works. Such a comparison requires scenarios in the construction works context. The provision of ISO 14025:2066, 6.7.2 on comparability shall apply.”*[2] In sum, “EPDs based on a declared unit shall not be used for comparisons.”[3]

The EPDs prepared from this report are not comparable as they are cradle-to-gate EPDs.

## 2. PRODUCT SYSTEM DESCRIPTION

SOPREMA is an international manufacturer specializing in the production of innovative products for waterproofing, insulation, soundproofing and vegetated solutions for the roofing, building envelope and civil engineering sectors. SOPREMA manufactures several types of water barriers and air barriers.

### 2.1. PRODUCT DESCRIPTION



**SOPRASEAL STICK VP membrane**  
[Photo courtesy of SOPREMA].

SOPRASEAL STICK VP<sup>1</sup> is a self-adhesive vapour permeable and air barrier membrane with a tri-laminated polypropylene facer used on walls. It can also be used as a through-wall flashing membrane and transition membrane. The self-adhesive underface is covered with a silicone release film.

### 2.2. TECHNICAL DATA

Properties	Standards	SOPRASEAL STICK VP
Tensile strength, MD/XD	ASTM D882	5.95 / 3.65 kN/m
Breaking strength, MD/XD	ASTM D5034	400 N / 310 N
Tear resistance, MD/XD	CAN/CGSB 51.32-M89	64 N / 54 N
Water vapour transmission	ASTM E96-B ASTM E96-A	972 ng/Pa•s•m <sup>2</sup> (17 perms) 629 ng/Pa•s•m <sup>2</sup> (11 perms)
Air permeability @ 75 Pa	ASTM E2178	0.0025 L/s•m <sup>2</sup> *
Air leakage resistance @ 75 Pa	ASTM E2357	< 0.005 L/s•m <sup>2</sup>
Air permeance of membrane	CAN/ULC S741	< 0.001 L/s•m <sup>2</sup>
Air leakage rate classification	CAN/ULC S742	A1
Hydrostatic pressure for 5 hours	AATCC 127-08	Pass

Meet all ICC-ES AC-308 requirements.

\* Maximum value as per National Building Code of Canada is 0,02 L/s•m<sup>2</sup>.

<sup>1</sup> SOPRASEAL STICK VP is classified under the Construction Specification Institute (CSI) MasterFormat code 07 27 00 Air Barriers.



(All values are nominal)

## 2.3. PROPERTIES OF DECLARED PRODUCT AS DELIVERED

Specifications	SOPRASEAL STICK VP
Thickness	0.6 mm (24 mil)
Dimensions	0.15 m x 30 m (6 in x 98 ft)
	0.23 m x 30 m (9 in x 98 ft)
	0.30 m x 30 m (12 in x 98 ft)
	0.95 m x 30 m ( 37 in x 98 ft)
Weight including release film	0.346 kg/m <sup>2</sup> (0.071 lb/ft <sup>2</sup> )
Selvage width	50 mm (2 in)
Surface	Tri-layer laminated polypropylene
Underface	Self-adhesive, covered with a silicone release film
More details are available at	<a href="https://www.soprema.ca/en/products-systems/soprased-stick-vp">https://www.soprema.ca/en/products-systems/soprased-stick-vp</a>

(All values are nominal)

## 2.4. MATERIAL COMPOSITION

Component/Material	SOPRASEAL STICK VP
Polypropylene membrane	42.2%
Acrylic adhesive	37.6%
Protective layer (siliconized PET film)	20.2%
<b>TOTAL</b>	<b>100.0%</b>

## 2.5. MANUFACTURING

To prepare the SOPRASEAL STICK VP, the manufacturer assembles the components in a coating process. The product is then cut to size and packaged for shipment.

## 2.6. PACKAGING

There are 25 rolls per pallet and a stack of two pallets. Individual rolls of SOPRASEAL STICK VP are rolled on a cardboard roll, wrapped in polyethylene film and labelled (glossy coated paper). The rolls are placed on a polyethylene sheet covered pallet in an open cardboard box, covered with the cover of the cardboard box, which is itself covered by a wooden plate to support the second pallet. It is then strapped with polypropylene straps prior to being shrink wrapped. The preparation of the second pallet is identical to the first one, except for the wooden plate which is replaced with protective cardboard corners. The second pallet is stacked on the first one and the two are shrink wrapped together.



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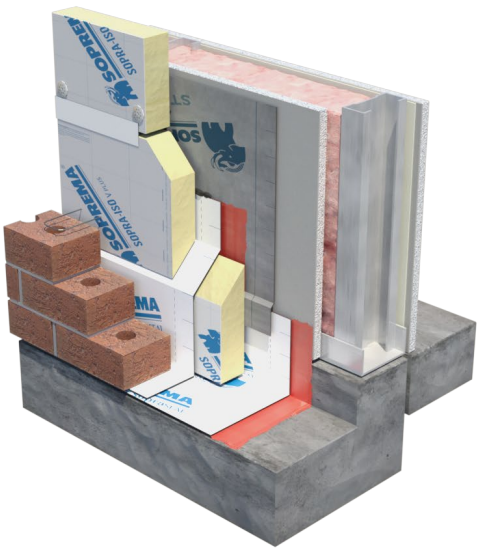




2.7. PRODUCT INSTALLATION

SOPRASEAL STICK VP is a self-adhesive membrane. To apply, peel off the top portion of the silicone release film/paper and adhere the membrane to the substrate, making sure that the membrane is well aligned. Gradually peel off the remaining silicone release film, making sure the membrane is kept tight and adheres completely to avoid air pockets and wrinkles. Once the membrane is installed, use a hard roller to apply pressure over the entire surface to ensure uniform adhesion to the substrate. Refer to the table below for details on gross/net coverage per roll and application temperatures.

Specifications	Gross / Net coverage per roll	Application temperature
SOPRASEAL STICK VP (30 m x 0.95 m)	28.5 / 26.2 m <sup>2</sup> (301 / 280 ft <sup>2</sup> )	-7 to 40°C (19 to 104°F)



[Photo courtesy of SOPREMA]

2.8. REFERENCE SERVICE LIFE AND CONDITION OF USE

For this EPD, the system boundaries encompass a cradle-to-gate scope. Environmental impacts of products in the use phase are excluded from this declaration, as per ASTM PCR Water-Resistive and Air Barriers.[3]

2.9. DISPOSAL

At their end-of-life, SOPREMA membranes are sent to landfill.



### 3. LCA CALCULATION RULES

#### 3.1. DECLARED UNIT

The selected declared unit (DU) for this study is **1 m<sup>2</sup> of membrane**. Reference flows are summarized in the table below.

Description	SOPRASEAL STICK VP
Declared unit	1 m <sup>2</sup>
Mass (kg /m <sup>2</sup> )	0.35
Thickness (mm)	0.6
Density (kg/m <sup>3</sup> )	576.67

#### 3.2. PRODUCTION AVERAGE

This EPD is specific to one product produced at a facility located in France. There is no production average.

#### 3.3. SYSTEM BOUNDARIES

According to ASTM's PCR,[3] the LCA modelling system boundaries can be **cradle-to-gate**, i.e., only cover the production life cycle stage as illustrated in **Table 1**. Within this life cycle stage, three (3) modules are considered, namely A-1) Extraction and upstream production, A-2) Transport to factory and A-3) Manufacturing. Construction (A-4; A-5), use (B-1 to B-7) and end-of-life (C-1 to C-4) stages are not included in this EPD. Figure 1 present the process flow diagram for SOPREMA's products. Neither green power nor CO<sub>2</sub> credits are used within the scope of this project.

**Table 1: Description of the system boundary life cycle stages and related information modules**

PRODUCTION STAGE			CONSTRUCTION PROCESS STAGE		USE STAGE							END-OF-LIFE STAGE			
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4
Extraction and Upstream Production	Transport to Factory	Manufacturing	Transport to site	Installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational Energy Use	Operational Water Use	Deconstruction / Demolition	Transport to Waste Processing or Disposal	Waste Processing	Disposal of Waste
X	X	X	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND

Key: X = included; MND = module not declared (excluded)

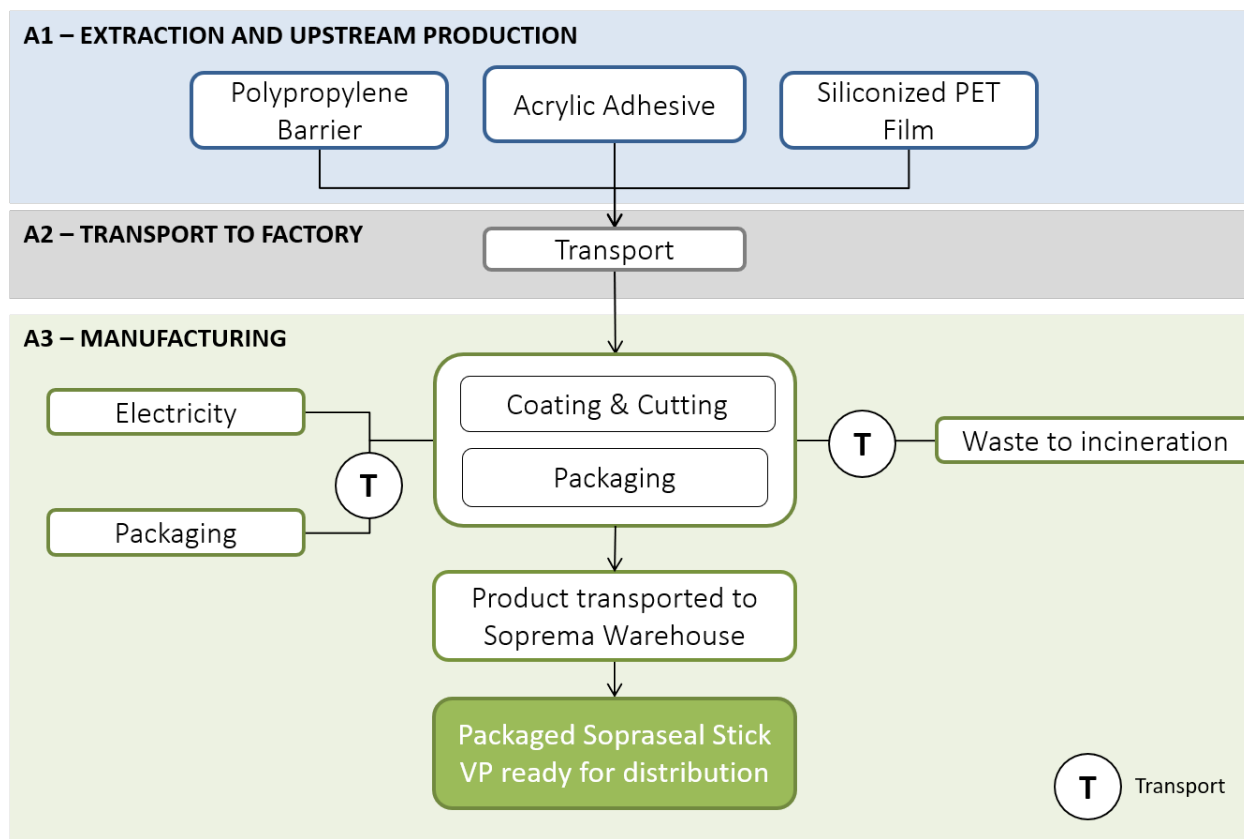


Figure 1: System Boundaries of Cradle-to-Gate LCA of SOPREMA's SOPRASEAL STICK VP membrane.

**Extraction and upstream production:** This module includes the extraction and transformation of raw materials needed to produce the SOPRASEAL STICK VP air barrier membrane.

**Transport to factory:** This module includes the transportation of raw materials to the manufacturing facility located in France.

**Manufacturing:** This stage includes electricity consumption used in the manufacturing processes and production waste, which is sent to the local incinerator. The manufacturing process does not require water, nor does it emit emissions directly to air, water or soil.

Packaging materials to make products ready for shipment, as well as their transport to the manufacturing facility, is also covered by this stage.

Furthermore, the transport of the product to the local SOPREMA warehouse is included.



### 3.4. CUT-OFF CRITERIA

According to ISO 21930:2017, cut-off rules shall not be applied to hide data. All data shall be included. In the case of insufficient data, the cut-off criteria shall be 1% of energy or 1% of total mass input and 1% of environmental impacts of the unit process. The total cut-off input flows per modules shall be a maximum of 5% energy, mass and environmental impacts. No cut-off w

**No known flows are deliberately excluded from this EPD.**

For this EPD, no data on the construction, maintenance or dismantling of the capital assets, daily transport of employees, office work, business trips or other employee activities were included in the model. The model only takes into account the processes associated with infrastructure that are already included in the ecoinvent unit processes.

### 3.5. ALLOCATION

Allocation, if required, shall follow the requirements and guidance of ISO 14044:2006, Section 4.3.4.[3,4]

Energy data was provided for the entire manufacturing plant; thus, allocation was used to assign the share of energy consumed in the factory to the product under study. For the SOPRASEAL STICK VP, allocation was based on the **surface area**.

Waste processing of the material flows undergoing **recycling processes** are included up to the system boundary of the end-of-waste state.[2] In other words, a **cut-off approach** was used as further processing of the recycled material is part of raw material preparation of another product system (open-loop recycling).



[Photo courtesy of SOPREMA]

### 3.6. DATA SOURCES AND QUALITY REQUIREMENTS

Data Quality Parameter	Data Quality Discussion
Source of manufacturing data	Manufacturing data was collected from a specific manufacturing facility, which represents 100% of the product's production. This data included total annual mass and area of products under study: raw materials entering the production of the products under study, losses of materials, transport distance of materials, waste treatment, and product packaging. The data also included electricity consumption for the entire manufacturing facility as well as total annual production of all products produced.
Source of secondary data	Background data were taken from the ecoinvent 3.9.1 "cut-off" database.[5] Datasets were selected based on their representativeness of the products' composing materials. When appropriate, the dataset's grid mix was changed for the grid mix of the province or country where production takes places. Otherwise, ecoinvent data representative of the global market or "rest-of-the-world" were selected as proxies.
Geographical representativeness	Electricity consumption is based on the electricity mix provided by the electricity supplier. Geographical correlation of the material composing the product and the selected datasets are largely representative of the same area. When this was not possible, datasets representing a larger geographical area were taken.
Temporal representativeness	Primary data represents the 2021 production year. Life cycle inventory datasets from ecoinvent are not always published within the last 10 years; nevertheless, ecoinvent remains a reference LCI database.
Technological representativeness	Primary data, obtained from the manufacturer, is representative of the current technologies and materials used by this company.
Completeness	All relevant process steps were considered and modelled to satisfy the goal and scope. No known flows were cut off.

## 4. LIFE CYCLE ASSESSMENT RESULTS

### 4.1. RESULTS TABLES

It should be noted that Life Cycle Impact Assessment (LCIA) results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins or risks.

Environmental Indicator		Unit
<b>TRACI 2.1</b>		
GWP <sub>100</sub> -AR5 <sup>(1)</sup>	Global warming potential	kg CO <sub>2</sub> eq.
GWP <sub>100</sub> -AR4 <sup>(2)</sup>	Global warming potential	kg CO <sub>2</sub> eq.
AP	Acidification potential	kg SO <sub>2</sub> eq.
EP	Eutrophication potential	kg N eq
ODP	Ozone layer depletion potential	kg CFC-11 eq.
SFP	Smog formation potential	kg O <sub>3</sub> eq
RDP	Resource depletion potential – fossil fuels	MJ Surplus
<b>Resource Use</b>		
PENR-fossil	Primary energy non-renewable, fossil	MJ, HHV
PENR-nuclear	Primary energy non-renewable, nuclear	MJ, HHV
PER-biomass	Primary energy renewable, biomass	MJ, HHV
PER-swhg	Primary energy renewable, solar, wind, hydroelectric and geothermal energy	MJ, HHV
<b>Material Resources Consumption and Waste</b>		
NRMR <sup>(3)</sup>	Non-renewable material resources	kg
RMR <sup>(4)</sup>	Renewable material resources	kg
NFW <sup>(5)</sup>	Net fresh water	L
HWD <sup>(6)</sup>	Hazardous waste disposed	kg
NHWD <sup>(7)</sup>	Non-hazardous waste disposed	kg

#### Table Notes – TRACI 2.1

(1) GWP 100, excludes biogenic CO<sub>2</sub> removals and emissions associated with biobased products and packaging; 100-year time horizon GWP factors are provided by the IPCC 2013 Fifth Assessment Report (AR5).

(2): GWP 100, excludes biogenic CO<sub>2</sub> removals and emissions associated with biobased products and packaging; 100-year time horizon GWP factors are provided by the IPCC 2007 Fourth Assessment Report (AR4).

#### Table Notes – Material Resource Consumption and Waste

(3): Calculated based on the product's material input.

(4): The product does not contain renewable material in its composition.

(5): Represents the use of net fresh water calculated from life cycle inventory results, i.e., water consumption using ReCiPe Midpoint (E) 2016.

(6): Calculated from life cycle inventory results, based on datasets classified under "treatment and disposal of hazardous waste." The manufacturer does not generate hazardous waste during the manufacturing process.

(7): Calculated from life cycle inventory results, based on waste that is neither "hazardous" nor "radioactive."

Additional Environmental Indicators		Unit
<b>Resource use</b>		
$RPR_E^{(1)}$	Renewable primary resources used as energy carrier (fuel)	MJ, LHV
$RPR_M^{(2)}$	Renewable primary resources with energy content used as material	MJ, LHV
$RPR_T$	Renewable primary resources total	MJ, LHV
$NRPR_E^{(3)}$	Non-renewable primary resources used as energy carrier (fuel)	MJ, LHV
$NRPR_M^{(4)}$	Non-renewable primary resources with energy content used as material	MJ, LHV
$NRPR_T$	Non-renewable primary resources total	MJ, LHV
$SM^l$	Secondary materials	kg
RSF	Renewable secondary fuels	MJ, LHV
NRSF	Non-renewable secondary fuels	MJ, LHV
$FW^{(5)}$	Use of net freshwater resources	m <sup>3</sup>
<b>Output Flows and Waste Categories</b>		
$HWD^{(6)}$	Hazardous waste disposed	kg
$NHWD^{(7)}$	Non-hazardous waste disposed	kg
$HLRW^{(8)}$	High-level radioactive waste, conditioned, to final repository	m <sup>3</sup>
$ILLRW^{(9)}$	Intermediate- and low-level radioactive waste, conditioned to final repository	m <sup>3</sup>
CRU	Components for re-use	kg
MFR	Materials for recycling	kg
MER	Materials for energy recovery	kg
EE	Exported energy	MJ, LHV

**Table Notes – Resource Use**

(1):  $RPR_E = RPR_T - RPR_M$ , where  $RPR_T$  is equal to the value for renewable energy obtained using the CED LHV methodology.

(2): Calculated as per ACLCA ISO 21930 Guidance, 6.2 Renewable primary resources with energy content used as a material,  $RPR_M$ .

(3):  $NRPR_E = NRPR_T - NRPR_M$ , where  $NRPR_T$  is equal to the value for non-renewable energy obtained using the CED LHV methodology.

(4): Calculated as per ACLCA ISO 21930 Guidance, 6.4 Non-renewable primary resources with energy content used as a material,  $NRPR_M$ .

(5): Represents the use of net freshwater calculated from life cycle inventory results, i.e., water consumption using ReCiPe Midpoint (E) 2016.

**Table Notes – Output Flows and Waste Categories**

(6): Calculated from life cycle inventory results, based on datasets classified under "treatment and disposal of hazardous waste." The manufacturer does not generate hazardous waste during the manufacturing process.

(7): Calculated from life cycle inventory results, based on waste that is neither "hazardous" nor "radioactive."

(8): Calculated from life cycle inventory results, based on ecoinvent waste flow "high-level radioactive waste for final repository."

(9): Calculated from life cycle inventory results, based on ecoinvent waste flow "low-level radioactive waste for final repository."

SOPRASEAL STICK VP					
Environmental Indicator	Unit	A1 (per m <sup>2</sup> )	A2 (per m <sup>2</sup> )	A3 (per m <sup>2</sup> )	A1 - A3 (per m <sup>2</sup> )
<b>TRACI 2.1</b>					
GWP <sub>100</sub> -AR5 <sup>(1)</sup>	kg CO <sub>2</sub> eq.	9.69E-01	2.59E-02	1.99E-01	1.19E+00
GWP <sub>100</sub> -AR4 <sup>(2)</sup>	kg CO <sub>2</sub> eq.	9.43E-01	2.55E-02	1.98E-01	1.17E+00
AP	kg SO <sub>2</sub> eq.	3.27E-03	5.52E-05	1.45E-03	4.78E-03
EP	kg N eq	2.06E-03	1.96E-05	3.50E-04	2.43E-03
ODP	kg CFC-11 eq.	2.32E-05	6.34E-10	2.90E-09	2.32E-05
SFP	kg O <sub>3</sub> eq	4.33E-02	1.02E-03	4.22E-02	8.65E-02
RDP	MJ Surplus	2.13E+00	4.74E-02	2.47E-01	2.43E+00
<b>Resource Use</b>					
PENR-fossil	MJ, HHV	2.82E+01	4.09E-01	2.48E+00	3.11E+01
PENR-nuclear	MJ, HHV	1.40E+00	8.02E-03	1.13E+00	2.54E+00
PER-biomass	MJ, HHV	3.42E-01	1.29E-03	1.01E+00	1.36E+00
PER-swhg	MJ, HHV	7.25E-01	4.45E-03	4.58E-01	1.19E+00
<b>Material Resource Consumption and Waste</b>					
NRMR <sup>(3)</sup>	kg	3.46E-01	0.00E+00	0.00E+00	3.46E-01
RMR <sup>(4)</sup>	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NFW <sup>(5)</sup>	L	1.30E+01	5.44E-02	3.15E+00	1.62E+01
HWD <sup>(6)</sup>	kg	6.23E-01	9.80E-03	5.68E-02	6.90E-01
NHWD <sup>(7)</sup>	kg	5.93E-01	3.42E-02	5.34E-02	6.81E-01

**Table Notes – TRACI 2.1**

- (1) GWP 100, excludes biogenic CO<sub>2</sub> removals and emissions associated with biobased products and packaging; 100-year time horizon GWP factors are provided by the IPCC 2013 Fifth Assessment Report (AR5).
- (2): GWP 100, excludes biogenic CO<sub>2</sub> removals and emissions associated with biobased products and packaging; 100-year time horizon GWP factors are provided by the IPCC 2007 Fourth Assessment Report (AR4).

**Table Notes – Material Resource Consumption and Waste**

- (3): Calculated based on the product's material input.
- (4): The product does not contain renewable material in its composition.
- (5): Represents the use of net fresh water calculated from life cycle inventory results, i.e., water consumption using ReCiPe Midpoint (E) 2016.
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SOPRASEAL STICK VP					
Environmental Indicator	Unit	A1 (per m <sup>2</sup> )	A2 (per m <sup>2</sup> )	A3 (per m <sup>2</sup> )	A1 - A3 (per m <sup>2</sup> )
<b>Resource Use</b>					
RPR <sub>E</sub> <sup>(1)</sup>	MJ, LHV	1.07E+00	5.74E-03	1.47E+00	2.54E+00
RPR <sub>M</sub> <sup>(2)</sup>	MJ, LHV	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RPR <sub>T</sub>	MJ, LHV	1.07E+00	5.74E-03	1.47E+00	2.54E+00
NRPR <sub>E</sub> <sup>(3)</sup>	MJ, LHV	2.76E+00	3.59E-01	3.03E+00	6.14E+00
NRPR <sub>M</sub> <sup>(4)</sup>	MJ, LHV	1.56E+01	0.00E+00	0.00E+00	1.56E+01
NRPR <sub>T</sub>	MJ, LHV	1.84E+01	3.59E-01	3.03E+00	2.18E+01
SM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ, LHV	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ, LHV	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW <sup>(5)</sup>	m <sup>3</sup>	1.30E-02	5.44E-05	3.15E-03	1.62E-02
<b>Output Flows and Waste Categories</b>					
HWD <sup>(6)</sup>	kg	6.23E-01	9.80E-03	5.68E-02	6.90E-01
NHWD <sup>(7)</sup>	kg	5.93E-01	3.42E-02	5.34E-02	6.81E-01
RWD		2.02E-07	2.04E-09	2.41E-07	4.45E-07
HLRW <sup>(8)</sup>	m <sup>3</sup>	5.56E-10	5.60E-12	6.64E-10	1.23E-09
ILLRW <sup>(9)</sup>	m <sup>3</sup>	4.06E-09	3.57E-11	5.09E-09	9.18E-09
CRU	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE	MJ, LHV	0.00E+00	0.00E+00	0.00E+00	0.00E+00

**Table Notes – Resource Use**

(1):  $RPR_E = RPR_T - RPR_M$ , where  $RPR_T$  is equal to the value for renewable energy obtained using the CED LHV methodology.

(2): Calculated as per ACLCA ISO 21930 Guidance, 6.2 Renewable primary resources with energy content used as a material,  $RPR_M$ .

(3):  $NRPR_E = NRPR_T - NRPR_M$ , where  $NRPR_T$  is equal to the value for non-renewable energy obtained using the CED LHV methodology.

(4): Calculated as per ACLCA ISO 21930 Guidance, 6.4 Non-renewable primary resources with energy content used as a material,  $NRPR_M$ .

(5): Represents the use of net freshwater calculated from life cycle inventory results, i.e., water consumption using ReCiPe Midpoint (E) 2016.

**Table Notes – Output Flows and Waste Categories**

(6): Calculated from life cycle inventory results, based on datasets classified under "treatment and disposal of hazardous waste." The manufacturer does not generate hazardous waste during the manufacturing process.

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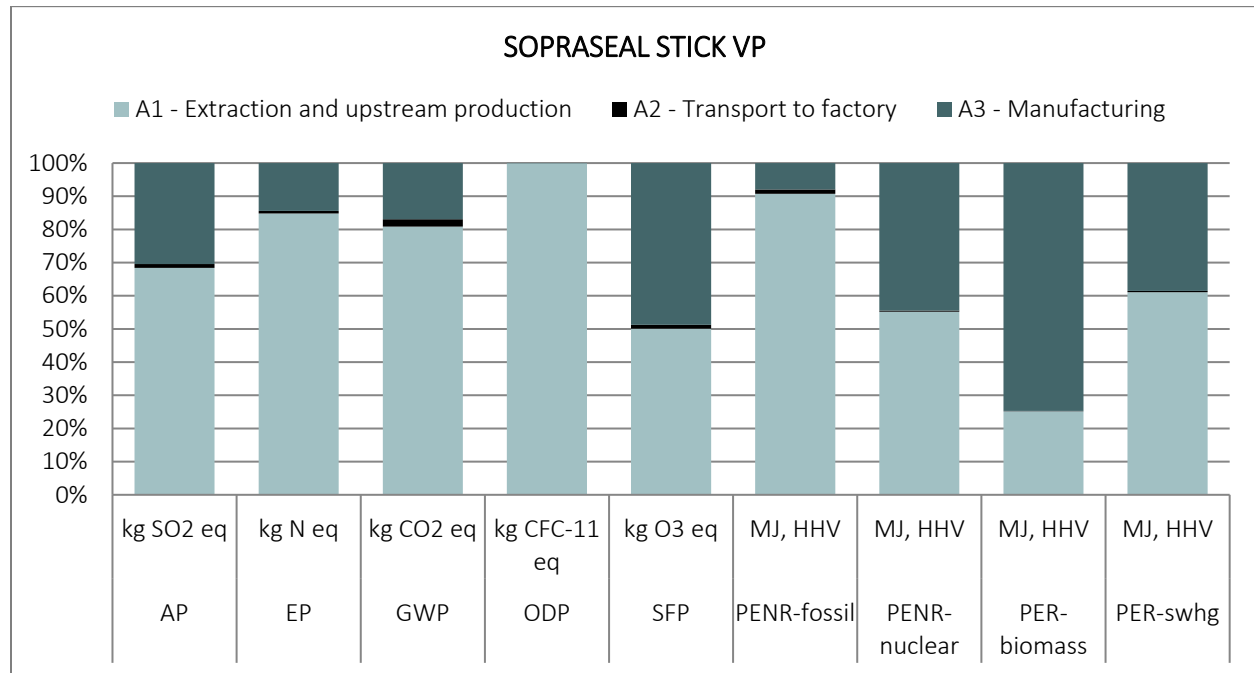
(8): Calculated from life cycle inventory results, based on ecoinvent waste flow "high-level radioactive waste for final repository."

(9): Calculated from life cycle inventory results, based on ecoinvent waste flow "low-level radioactive waste for final repository."



## 4.2. CONTRIBUTION ANALYSIS

As can be seen in the figure below, extraction and upstream production (A1) is the main contributor to all impact categories and energy consumption, except for primary renewable energy, biomass (PER-biomass) where it is manufacturing (A3). It should be noted that manufacturing (A3) is a large contributor to primary non-renewable energy, nuclear (PENR-nuclear) and primary renewable energy, solar, wind, hydroelectric and geothermal energy (PER-swhg).



## 5. ADDITIONAL ENVIRONMENTAL INFORMATION

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### 5.1. REGULATED HAZARDOUS SUBSTANCES

There are no ingredients present in the SOPRASEAL STICK VP which, within the current knowledge and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in the product safety data sheet.

### 5.2. DANGEROUS SUBSTANCES

SOPREMA's SOPRASEAL STICK VP is not expected to release dangerous substances during normal use.

### 5.3. FURTHER INFORMATION

SOPREMA has also published a Health Product Declaration® for the SOPRASEAL STICK VP. More details are available on the HPDC public repository: <https://www.hpd-collaborative.org/hpd-public-repository/>.

Additional product information can be found on SOPREMA's website (<https://www.soprema.ca/en/products-systems/building-components/walls/air-and-vapour-barrier>).

## REFERENCES

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- [1] International Organization for Standardization (ISO), "ISO 14025 Environmental labels and declarations - Type III environmental declarations - Principles and procedures," 2006.
- [2] International Organization for Standardization (ISO), "ISO 21930:2017(E) Sustainability in buildings and civil engineering works — Core rules for environmental product declarations of construction products and services," 2017.
- [3] ASTM International, "Water-Resistive and Air Barriers PCR," 2017[Online]. Available: <https://www.nsf.org/standards-development/product-category-rules>.
- [4] International Organization for Standardization (ISO), "ISO 14044:2006/AMD1:2017/AMD 2:2020 Environmental management - Life cycle assessment - Requirements and guidelines," 2006.
- [5] F. R. *et al.*, "Overview and Methodology. ecoinvent report No. 1," Dübendorf, 2007.
- [6] ASTM International, "ASTM Program Operator Rules. Version: 8.0, Revised 04/29/20," 2020[Online]. Available: [www.astm.org](http://www.astm.org).
- [7] Vertima, "Life Cycle Assessment of SOPREMA's Air Barriers," 2023.



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**EPD**

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