Environmental Product Declaration

In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for:

AIROLEN® SPORT

from

NMC

SOLUTIONS FOR INDUSTRIES

Programme:	The International EPD® System, www.environdec.com
Programme operator:	EPD International AB
Type of EPD:	EPD of multiple products, based on worst-case results
EPD registration number:	EPD-IES-0026361:001
Version date:	2025-12-03
Validity date:	2030-12-02

An EPD may be updated or depublished if conditions change. To find the latest version of the EPD and to confirm its validity, see www.environdec.com

General information

Programme Information	
Programme:	The International EPD® System
Address:	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
Website:	www.environdec.com
E-mail:	support@environdec.com

Product Category Rules (PCR)
CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product Category Rules (PCR): PRODUCT CATEGORY RULES PCR 2019:14 VERSION 2.0.1 CONSTRUCTION PRODUCTS; UN CPC code: 369 (3695)
PCR review was conducted by: The Technical Committee of the International EPD® System. The review panel may be contacted via info@environdec.com. Chair of the PCR review: Rob Rouwette (chair), Noa Meron (co-chair). The review panel may be contacted via the Secretariat www.environdec.com/contact
c-PCR: EN 16783:2024 Thermal insulation products C-PCR-005 (TO PCR 2024:14)**.**

Third-party Verification
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via: ☒ **Individual EPD verification without a pre-verified LCA/EPD tool** Third-party individual verifier: Matthew Fishwick, Fishwick Environmental Ltd Approved by: International EPD System
Procedure for follow-up of data during EPD validity involves third party verifier: ☐ Yes ☒ No

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but published in different EPD programmes, may not be comparable. For two EPDs to be comparable, they shall be based on the same PCR (including the same first-digit version number) or be based on fully aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have identical scope in terms of included life-cycle stages (unless the excluded life-cycle stage is demonstrated to be insignificant); apply identical impact assessment methods (including the same version of characterisation factors); and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

INFORMATION ABOUT EPD OWNER

Owner of the EPD:

NMC Sverige AB

Address:

NMC Sverige AB
Stenstorpsvägen 35
SE-305 75 Getinge

Contact:

info@nmc.se

Description of the organisation:

NMC is a leading, growth-oriented international company specializing in synthetic foams. For 70 years, the company has put customers and people at the heart of its actions, identifying more and more products and solutions that contribute to comfort and protection for a better life. Some 1,650 employees at 22 sites currently serve customers in 120 countries.
NMC is active in the following sectors: solutions for industries, technical insulation, protective packaging, decorative design elements, underlays for floating floors and sport and leisure.

Product-related or management system-related certifications:

The production site is certified ISO 9001:2015 and ISO 14001:2015 certified.

EPD Type

This EPD for several products is based on the worst-case results for the product group (N AIRO BAND Plus30Gry1500x15/33m+P200/11). The raw materials and manufacturing methods are identical. Only the thickness of the product delivered varies. The LCA results given in this EPD are those for which the items have the highest weight per square meter (worst case).

PRODUCT INFORMATION

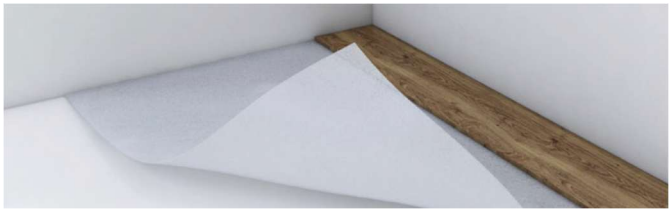
Product name:

AIROLEN® SPORT

Product identification:

Brand: NOMATEC Assortment: AIROLEN® SPORT

Visual representation of the product



UN CPC code:

369 (36910)

Product description:

AIROLEN® Sport consists of an age-resistant expanded polyethylene foam with closed cells. The new developed fine cell structure gives excellent compression strength and sound insulation properties. AIROLEN® Sport is used under sports floor in order to reduce impact sound and to contribute to the levelling of the substructure.

AIROLEN® Sport is ideal for sport floor. Its fine cellular structure gives exceptional physical properties. Light, strong and flexible, it offers high pressure resistance and excellent dimensional stability. AIROLEN® SPORT is fully recyclable and is sold in plastic bags. (More information on Downloads – Nomafoam (nmc-nomafoam.com)

TECHNICAL DATA

Properties	Norm	Unit	Value
Thickness	SP 1116	mm	5, 10, 15
Density	ISO 845	kg/m³	30
Thermal resistance (R)	DIN 52612 ISO 2581	m² K/W	0,045
Water absorption	DIN 53433 ISO 2581	%	< 0,5
Aging resistance	SP 0414	Year	50

Name and location of production site:

NMC Sverige AB
Stenstorpsvägen 35
SE-305 75 Getinge

Geographical scope:

The raw materials are sourced in Europe, the product is manufactured in Sweden and marketed, used and disposed of in Europe.

CONTENT DECLARATION

The mass (weight) per functional unit:

0,450 kg /m² (functional unit) worst-case product.

Product components	Mass (kg per functional unit)	Post-consumer material, mass-% (% per functional unit)	Biogenic material, kg C / functional unit
Polymer (LDPE)	0,39	0	0
Various additives (pigments, stabilizers, processing agent...)	0,02	0	0

Coex Film	0,002	0	0
Foaming agent	0,04	0	0
TOTAL	0,450	0	0
Packaging materials	**Mass (kg per functional unit)**	**Mass-% (versus the product)**	**Biogenic material, kg C / functional unit**
Plastic film	0,009	1,9	0
TOTAL	0,009	1,9	0

1 kg biogenic carbon in the product/packaging is equivalent to the uptake of 44/12 kg of CO_2.

Note: Packaging varies from one item to another; in the table above, the packaging values indicated are a weighted average based on the production quantities of the various items.

REACH-Regulated Substances and Safety Information

Under the European Chemicals Regulation REACH, manufacturers, importers, and downstream users must register their chemicals and are responsible for their safe use. NMC S.A. uses only verifiably registered and approved substances in its production. AIROLEN® SPORT does not contain any substances of very high concern (SVHC).

LCA INFORMATION

Functional Unit:

1 m² (30 kg/m³, from 150 g/m² to 450 g/m²) of AIROLEN® SPORT.
Remark: The LCA results given in this EPD are those for which the items have the highest weight per square meter (worst case).

Product lifespan:

50 years

Time representativeness:

The complete reference year used for the plant production data is 2024.

Geographical and temporal representativeness of primary data

The primary data collected relating to the manufacture of the product studied are representative of production in 2024 for the NMC Sweden site. NMC Sweden buys its electricity with a certificate of origin guaranteeing that it is produced entirely from nuclear energy sources. In addition, the NMC Sweden factory has photovoltaic panels. The electricity production process used for the plant has an impact on GWP of 0,00724 kg CO_2e/kWh.

Database(s) and LCA software used:

The LCA and results were calculated using LCA for Expert 10.9 and its content version 2025. Some of the data used comes from the ECOINVENT 3.10 database in the cut-off version.

Description of system boundaries:

Cradle to grave and module D.

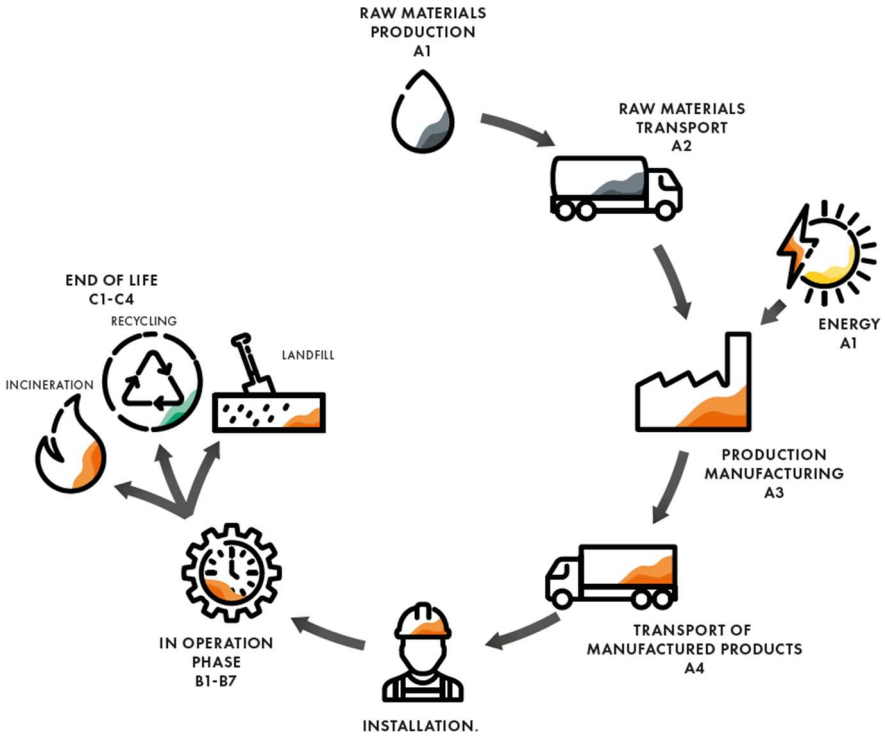
Cut-off Criteria for the Exclusion of Inputs and Outputs:

In compliance with the rules in EN 15804:2012+A2:2019, 6.3.6, the cut-off criteria are 1% of renewable and non-renewable primary energy usage and 1% of the total mass input of a unit process. All known inputs and outputs were included. Data gaps were filled with conservative assumptions and generic data. The neglected input flows are each below 1% of the total mass or the total impact of primary energy. In total, they constitute less than 5% of the overall mass or 5% of the total energy.
Workshop cleaning, the administrative department, employee transport, manufacturing and heavy maintenance of production equipment have been omitted from the boundaries of the system in accordance with standard EN 15804.

Allocation methods:

During the production process, pre-consumer scrap is generated (e.g., off-cuts, process waste). This scrap is not discarded but is reprocessed internally and reused in the manufacturing of certain products. Note: These products belong to different product systems and are not covered by this EPD. In accordance with PCR 2019:14 v2.0.1 section 4.5.3, an economic allocation method has been applied to assign a portion of the environmental burden to the internally recycled material, as it contributes to the production of other products outside the scope of this EPD. No inputs of pre-consumer or post-consumer scrap are used in the system. The cut-off end-of-life allocation approach is consistently applied for materials leaving the product system for recycling (in module C3). Site-level processes are allocated to products based on their respective production mass.

Process flow diagram:



- Production stage, A1- A3:

This stage considers the extraction, production and transport of raw materials, the production of energy consumed on site, the manufacture of AIROLEN® SPORT, its packaging and storage prior to shipment and delivery. The treatment of waste leaving the plant is a mix of recycling and incineration.

- A1 Raw materials supply

This module takes into account the supply and processing of raw materials and the energies generated upstream of the manufacturing process.

- A2 Transport to manufacturing site

This module takes into account road transport. Vehicles used in the modelling: Euro 0-6 diesel mix freight truck with a loading capacity of 27 tons. The truck loading rate for raw materials has been estimated at 50%.

- A3 Production

The manufacture of AIROLEN® SPORT involves incorporating the formulation ingredients into an extruder, adding a foaming agent, mixing, heating and then extruding the mixture through a die where foaming takes place. The product is then water-cooled before being cut to size, packaged, and stored.

- A4 transport

This step models the transport of AIROLEN® SPORT from the production site to the building site, in most cases via an intermediary.

Scenario information	Value	Unit
Vehicle type	Truck-trailer, Euro 0 - 6 mix POCP adapted	
Fuel type	Diesel	
Distance	234	km
Fill rate mass payload capacity	10	%
Gross vehicle weight	34 - 40t gross weight / 27t payload capacity	t

- A5 Installation

AIROLEN® SPORT is installed by hand and requires no special tools other than a knife. Packaging plastic bag brought to the site are estimated to be sent to a waste incineration centre. Auxiliary inputs have not been included in the life-cycle analysis.

Scenario information	Value	Unit
Auxiliary inputs for installation	Not applicable	kg
Water use	Not applicable	m^3
Use of other resources	Not applicable	kg
Quantitative description of energy type (regional mix) and consumption during installation process	Not applicable	kWh or MJ
Material waste on construction site prior to treatment of waste generated by product installation (specified by type)	The 2% loss criterion has been adopted as recommended in EN 16783, which is equivalent to 0,0090 kg per m² of AIROLEN® SPORT placed.	kg
Outgoing materials (specified by type) generated by waste processing on the construction site, e.g. collection for recycling, energy recovery, disposal (specified by route)	Construction site waste is considered to be sent to a municipal waste incineration plant, along with the 0,009 kg of plastic packaging.	kg

Direct emissions into ambient air, soil and water	Not applicable	kg

- Life stage in use, B1-B7

Once installed, AIROLEN® SPORT requires no maintenance or repair. It is dismantled at the end of the building's life or removed when no longer required. In addition, the product undergoes no modification or degradation throughout its entire life cycle. For these reasons, there is no impact on modules B1 to B7.

- End-of-life stage, C1-C4

- C1 Deconstruction, demolition

As with product installation, dismantling is carried out manually and requires no special equipment other than a knife. Consequently, there is no impact associated with this module.

- C2 Transport

The choice of transport for the end-of-life stage was that of truck with a Euro 0-6 diesel mix engine and a loading capacity of 27 tons. Diesel consumption of 38 Liters per 100 km. The average distance between the dismantling site and the treatment centre (incinerator, recycling centre and landfill) was estimated at 50 km.

- C3 Treatment of waste for reuse, recovery and/or recycling and C4 disposal.

AIROLEN® SPORT is fully recyclable. However, end-of-life has been modelled and based on a study of plastic construction waste processing in Europe by Plasticseurope.org. The ratio used in this study for low-density polyethylene plastics is 27% sent for mechanical recycling, 51% disposed of in incinerators with energy recovery and 22% landfilled as non-hazardous waste.

Scenario information	Value and Unit
Collecting process	Manual disassembly
Type-specified recovery system	0,12 kg foam for recycling 0,23 kg foam for energy recovery
Elimination specified by type	0,1 kg for final disposal (Landfill)
Scenario assumptions	Transport over 50 km

- Module D

A benefit beyond the boundaries of the system is the recovery of energy generated from the incineration of waste at end-of-life In the LCA end-of-life calculation, there is no gain for landfill; the gains in energy recovered during incineration and the avoidance of the use of new materials during recycling have been taken into account by the Sphera software and are accounted for in module D.

For recycling, burdens associated with the recycling process are included, and quality adjustment factors are applied according to PCR 2019:14 v2.0.1. Net scrap is calculated as output scrap minus input scrap. For incineration, the energy content of the material is considered, and efficiency factors for heat and

electricity recovery are applied. Datasets for avoided products (e.g., virgin PE, PP, PET, or paper and electricity and heat) are taken from the GaBi database.

More information:

More product details: Downloads – Nomafoam
Name and contact information of LCA practitioner: Alain Baltus NMC sa Gert-Noël-Strasse B-4731 Eynatten info@nmc.eu

AIROLEN® SPORT is manufactured at NMC's Swedish site. The lifecycle analysis was carried out based on the worst-case results for all references. For the LCA calculation all elementary input processes as well as all energy and water inputs and waste outputs were considered. This EPD only includes environmental impacts linked to the product itself, such as material losses and packaging disposal.

Modules declared, geographical scope, share of specific data (in GWP-GHG results) and data variation (in GWP-GHG results):

	Product stage			Construction process stage		Use stage							End of life stage				Resource recovery stage
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
Module	**A1**	**A2**	**A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Modules declared	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Geography	EU 27	EU 27	SE	EU 27	EU 27	EU 27	EU 27	EU 27	EU 27	EU 27	EU 27	EU 27	EU 27	EU 27	EU 27	EU 27	EU 27
Share of specific data	0,4%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	-66,7%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	N/A (single site)			-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: X = Modules declared, ND = Modules not declared

The share of primary data is calculated based on GWP-GHG results. It is a simplified indicator for data quality that supports the use of more primary data, to increase the representativeness of and comparability between EPDs. Note that the indicator does not capture all relevant aspects of data quality and is not comparable across product categories.

Overview of Data Quality and Primary Data Contribution (A1–A3)

Process	Source type	Source	Reference year	Data category	Share of primary data, of GWP-GHG results for A1-A3
Polyethylene low density granulate (LDPE/PE-LD)	Database	LCA for Expert V 2025.1	2024	Secondary data	0%
Electricty Green	Company data	LCA for Expert V 2025.1	2021	Primary data	0,1%
Electricity from photovoltaic	Company data	LCA for Expert V 2025.1	2021	Primary data	0,1%
Thermal energy from natural gas	Company data	LCA for Expert V 2025.1	2021	Primary data	0,2%
Total share of primary data, of GWP-GHG results for A1-A3					0,4%

The share of primary data for modules A1-A3 is very low (≈0,4%) because most raw materials come from generic databases. LDPE, representing more than 10% of GWP-GHG, is reported as secondary data in accordance with the PCR.
Although LDPE contributes significantly (approximately 80%) to the GWP-GHG results for module A1-A3, only secondary data from a recognized database (LCA for Expert V 2025.1) was available.

Data Quality Assessment Summary

In accordance with the requirements of Section A.5.4 of the GPI 5.0, a data quality assessment was conducted for all datasets used in the life cycle assessment (LCA) of the product. All data are secondary, originating from recognized LCA databases. At present, obtaining primary data directly from suppliers remains very challenging.
The overall assessment of data quality yielded the following average scores (1 = very good, 5 = very poor):

Temporal representativeness: 1,3
Geographical representativeness: 2
Technological representativeness: 2

These scores reflect the current limitations in data availability and supplier access. Nevertheless, the selected datasets are considered sufficiently representative for the intended use of the EPD and comply with the transparency requirements of the PCR and GPI.

ENVIRONMENTAL PERFORMANCE

LCA results of the products - main environmental performance results

Mandatory impact category indicators according to EN 15804

For the characterization factors (CF) to be used, EN 15804 refers to the "EN 15804 reference package" available at the JRC webpage. In February 2023, this reference package was updated to be based on the EF 3.1 package for CFs to be used in the PEF framework. For this EPD, the EN 15804 reference package based on EF 3.1 is being used.

Results per Functional Unit 1 m² of AIROLEN® SPORT

Indicator	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
GWP-total	kg CO_2 eq.	1,34E+00	3,30E-02	4,42E-02	0,00E+00	0,00E+00	2,07E-03	7,53E-01	3,00E-03	-5,50E-01
GWP-fossil	kg CO_2 eq.	1,34E+00	3,27E-02	4,42E-02	0,00E+00	0,00E+00	2,05E-03	7,53E-01	2,99E-03	-5,50E-01
GWP-biogenic	kg CO_2 eq.	1,42E-03	0,00E+00	1,42E-06	0,00E+00	0,00E+00	0,00E+00	2,96E-04	0,00E+00	0,00E+00
GWP-luluc	kg CO_2 eq.	1,19E-03	3,28E-04	3,19E-06	0,00E+00	0,00E+00	2,10E-05	7,58E-05	8,19E-06	-5,73E-04
ODP	kg CFC 11 eq.	1,41E-10	5,29E-15	9,50E-15	0,00E+00	0,00E+00	3,39E-16	5,08E-13	1,02E-14	-3,86E-12
AP	mol H^+ eq.	2,83E-03	5,08E-05	5,72E-06	0,00E+00	0,00E+00	2,96E-06	1,25E-04	1,78E-05	-8,89E-04
EP-freshwater	kg P eq.	2,62E-06	8,59E-08	1,33E-09	0,00E+00	0,00E+00	5,50E-09	2,99E-07	1,67E-06	-6,24E-07
EP-marine	kg N eq.	7,62E-04	2,12E-05	1,58E-06	0,00E+00	0,00E+00	1,21E-06	2,90E-05	3,86E-06	-2,47E-04
EP-terrestrial	mol N eq.	8,20E-03	2,23E-04	2,63E-05	0,00E+00	0,00E+00	1,26E-05	4,92E-04	4,21E-05	-2,71E-03
POCP	kg NMVOC eq.	2,92E-02	5,42E-05	4,51E-06	0,00E+00	0,00E+00	2,69E-06	8,03E-05	1,22E-05	-8,83E-04
ADP-minerals&metals*	kg Sb eq.	1,80E-07	2,12E-09	1,04E-10	0,00E+00	0,00E+00	1,36E-10	8,73E-09	2,03E-10	-5,34E-08
ADP-fossil*	MJ	4,66E+01	4,08E-01	1,97E-02	0,00E+00	0,00E+00	2,61E-02	5,64E-01	4,95E-02	-1,33E+01
WDP*	m^3	2,21E-01	1,46E-04	4,20E-03	0,00E+00	0,00E+00	9,33E-06	7,27E-02	3,68E-04	-7,49E-02
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption									

The estimated impact results are only relative statements, which do not indicate the endpoints of the impact categories, exceeding threshold values, safety margins and/or risks.

** Disclaimer 1: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.*

Disclaimer 2: The results of the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3).

Additional mandatory and voluntary impact category indicators

Results per Functional Unit 1 m² of AIROLEN® SPORT										
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1-B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-GHG[1]	kg CO_2 eq.	1,34E+00	3,30E-02	4,42E-02	0,00E+00	0,00E+00	2,07E-03	7,53E-01	3,00E-03	-5,50E-01

Resource use indicators

Results per Functional Unit 1 m² of AIROLEN® SPORT										
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1-B7**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	MJ	3,69E+00	3,08E-02	4,79E-03	0,00E+00	0,00E+00	1,97E-03	3,10E-01	8,26E-03	-2,36E+00
PERM	MJ	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
PERT	MJ	3,69E+00	3,08E-02	4,79E-03	0,00E+00	0,00E+00	1,97E-03	3,10E-01	8,26E-03	-2,36E+00
PENRE	MJ	2,91E+01	4,08E-01	1,97E-02	0,00E+00	0,00E+00	2,61E-02	5,64E-01	4,95E-02	-1,33E+01
PENRM	MJ	1,74E+01	0,00E+00	-5,89E-01	0,00E+00	0,00E+00	0,00E+00	-1,68E+01	0,00E+00	0,00E+00
PENRT	MJ	4,66E+01	4,08E-01	-5,69E-01	0,00E+00	0,00E+00	2,61E-02	-1,63E+01	4,95E-02	-1,33E+01
SM	kg	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
RSF	MJ	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
NRSF	MJ	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
FW	m^3	7,13E-03	1,52E-05	9,99E-05	0,00E+00	0,00E+00	9,74E-07	1,80E-03	1,08E-05	-2,59E-03
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water									

The option for separating primary energy use into energy used as a raw material and energy used as an energy carrier is option A of PCR 2019:14.

Waste indicators

[1] This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO_2 is set to zero.

Results per Functional Unit 1 m² of AIROLEN® SPORT										
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1-B7**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste disposed	kg	1,97E-03	1,64E-11	9,74E-12	0,00E+00	0,00E+00	1,05E-12	1,47E-08	1,11E-11	-4,73E-09
Non-hazardous waste disposed	kg	1,68E-02	5,70E-05	4,02E-03	0,00E+00	0,00E+00	3,65E-06	1,57E-02	9,86E-02	-4,78E-03
Radioactive waste disposed	kg	1,93E-03	7,70E-07	6,63E-07	0,00E+00	0,00E+00	4,94E-08	7,06E-05	7,13E-07	-5,42E-04

Output flow indicators

Results per Functional Unit 1 m² of AIROLEN® SPORT										
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1-B7**	**C1**	**C2**	**C3**	**C4**	**D**
Components for re-use	kg	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
Material for recycling	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,22E-01	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	1,76E-02	0,00E+00	0,00E+00	0,00E+00	2,30E-01	0,00E+00	0,00E+00
Exported energy, electricity	MJ	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
Exported energy, thermal	MJ	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

Additional environmental impact indicators

Results per Functional Unit 1 m² of AIROLEN® SPORT										
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1-B7**	**C1**	**C2**	**C3**	**C4**	**D**
Particulate matter	Disease incidences	2,60E-08	4,58E-10	6,93E-11	0,00E+00	0,00E+00	2,69E-11	8,70E-10	1,83E-10	-7,61E-09
Ionising radiation, human health	kBq U235 eq.	2,48E-01	1,11E-04	8,92E-05	0,00E+00	0,00E+00	7,09E-06	1,16E-02	9,57E-05	-8,92E-02
Ecotoxicity, freshwater	CTUe	2,85E+01	5,31E-01	1,31E-02	0,00E+00	0,00E+00	3,40E-02	1,30E-01	1,13E-01	-5,42E+00
Human toxicity, cancer	CTUh	5,32E-10	7,16E-12	6,23E-13	0,00E+00	0,00E+00	4,59E-13	1,21E-11	1,56E-12	-1,51E-10
Human toxicity, non-cancer	CTUh	9,14E-09	4,00E-10	5,01E-11	0,00E+00	0,00E+00	2,56E-11	2,02E-10	2,77E-11	-2,44E-09

Land Use	-	2,35E+00	1,80E-01	4,61E-03	0,00E+00	0,00E+00	1,16E-02	1,97E-01	7,65E-03	-1,38E+00

Disclaimer 1 – for the indicator "Potential Human exposure efficiency relative to U235". This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure, or radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, radon and from some construction materials is also not measured by this indicator.

Disclaimer 2 – for the indicators "abiotic depletion potential for non-fossil resources", "abiotic depletion potential for fossil resources", "water (user) deprivation potential, deprivation-weighted water consumption", "potential comparative toxic unit for ecosystems", "potential comparative toxic unit for humans – cancerogenic", "Potential comparative toxic unit for humans - not cancerogenic", "potential soil quality index". The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high as there is limited experience with the indicator.

Complementary End-of-Life Scenarios (100%)

For the additional end-of-life scenarios (100% incineration, 100% recycling, 100% landfill), only the mandatory impact indicators defined by EN 15804+A2 are reported.

Results per Functional Unit 1 m² of AIROLEN® SPORT End of life 100% Recycling

Indicator	Unit	C2	C3	C4	D
GWP-total	kg CO_2 eq.	2,07E-03	1,29E-01	0,00E+00	-8,29E-01
GWP-fossil	kg CO_2 eq.	2,05E-03	1,27E-01	0,00E+00	-8,29E-01
GWP-biogenic	kg CO_2 eq.	0,00E+00	1,02E-03	0,00E+00	0,00E+00
GWP-luluc	kg CO_2 eq.	2,10E-05	2,58E-04	0,00E+00	-4,57E-04
ODP	kg CFC 11 eq.	3,39E-16	1,73E-12	0,00E+00	-2,91E-12
AP	mol H^+ eq.	2,96E-06	1,96E-04	0,00E+00	-1,87E-03
EP-freshwater	kg P eq.	5,50E-09	1,09E-06	0,00E+00	-1,21E-06
EP-marine	kg N eq.	1,21E-06	5,00E-05	0,00E+00	-5,02E-04
EP-terrestrial	mol N eq.	1,26E-05	5,55E-04	0,00E+00	-5,44E-03
POCP	kg NMVOC eq.	2,69E-06	1,27E-04	0,00E+00	-2,15E-03
ADP-minerals&metals*	kg Sb eq.	1,36E-10	3,07E-08	0,00E+00	-7,83E-08
ADP-fossil*	MJ	2,61E-02	1,78E+00	0,00E+00	-2,80E+01
WDP*	m^3	9,33E-06	2,37E-02	0,00E+00	-1,52E-01
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption				

Results per Functional Unit 1 m² of AIROLEN® SPORT End of life 100% Incineration

Indicator	Unit	C2	C3	C4	D
GWP-total	kg CO_2 eq.	2,07E-03	1,41E+00	0,00E+00	-6,40E-01
GWP-fossil	kg CO_2 eq.	2,05E-03	1,41E+00	0,00E+00	-6,39E-01

GWP-biogenic	kg CO_2 eq.	0,00E+00	4,24E-05	0,00E+00	0,00E+00
GWP-luluc	kg CO_2 eq.	2,10E-05	1,19E-05	0,00E+00	-8,82E-04
ODP	kg CFC 11 eq.	3,39E-16	7,86E-14	0,00E+00	-6,02E-12
AP	mol H^+ eq.	2,96E-06	1,42E-04	0,00E+00	-7,55E-04
EP-freshwater	kg P eq.	5,50E-09	9,57E-09	0,00E+00	-5,85E-07
EP-marine	kg N eq.	1,21E-06	3,04E-05	0,00E+00	-2,18E-04
EP-terrestrial	mol N eq.	1,26E-05	6,71E-04	0,00E+00	-2,44E-03
POCP	kg NMVOC eq.	2,69E-06	9,03E-05	0,00E+00	-5,92E-04
ADP-minerals&metals*	kg Sb eq.	1,36E-10	8,86E-10	0,00E+00	-6,33E-08
ADP-fossil*	MJ	2,61E-02	1,65E-01	0,00E+00	-1,13E+01
WDP*	m^3	9,33E-06	1,30E-01	0,00E+00	-6,66E-02
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption				

Results per Functional Unit 1 m² of AIROLEN® SPORT End of life 100% Landfill

Indicator	Unit	C2	C3	C4	D
GWP-total	kg CO_2 eq.	2,07E-03	0,00E+00	1,36E-02	0,00E+00
GWP-fossil	kg CO_2 eq.	2,05E-03	0,00E+00	1,36E-02	0,00E+00
GWP-biogenic	kg CO_2 eq.	0,00E+00	0,00E+00	0,00E+00	0,00E+00
GWP-luluc	kg CO_2 eq.	2,10E-05	0,00E+00	3,72E-05	0,00E+00
ODP	kg CFC 11 eq.	3,39E-16	0,00E+00	4,64E-14	0,00E+00
AP	mol H^+ eq.	2,96E-06	0,00E+00	8,10E-05	0,00E+00
EP-freshwater	kg P eq.	5,50E-09	0,00E+00	7,58E-06	0,00E+00
EP-marine	kg N eq.	1,21E-06	0,00E+00	1,75E-05	0,00E+00
EP-terrestrial	mol N eq.	1,26E-05	0,00E+00	1,91E-04	0,00E+00
POCP	kg NMVOC eq.	2,69E-06	0,00E+00	5,55E-05	0,00E+00
ADP-minerals&metals*	kg Sb eq.	1,36E-10	0,00E+00	9,23E-10	0,00E+00
ADP-fossil*	MJ	2,61E-02	0,00E+00	2,25E-01	0,00E+00
WDP*	m^3	9,33E-06	0,00E+00	1,67E-03	0,00E+00
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption				

Additional environmental information

AIROLEN® SPORT is made from low-density polyethylene. It is therefore fully recyclable and can be recycled when it reaches the end of its life. In the construction sector, 27% of LDPE used in buildings is recycled, and the aim should be to increase this percentage.

NMC Sweden are certified ISO 9001 and ISO 14001.

NMC has defined its sustainability strategy, keeping a foothold in the present and looking to the future. NMC has thus formalized a new set of guidelines that forms its group-wide sustainability strategy, embedded in the global business strategy. Sustainability goals have therefore been set for 2030, with three focus areas being circularity, decarbonisation, and empowerment.

https://nmc.eu/en/downloads/corporate-identity

To continue to reduce the environmental impact of the AIROLEN® SPORT we need to continue to increase our energy efficiency and the switch to more and more renewable energies.

In the recent past, NMC Sweden has installed photovoltaic panels, in addition, all the acquired electricity is coming from renewable sources. NMC is looking for further sources of renewable energy.

NMC are in addition actively looking for more sustainable sourcing and raw materials as well as more local suppliers to avoid long-distance transport as much as possible.

List of AIROLEN® SPORT references included in this EPD and Conversion factors.

Reference list of AIROLEN® SPORT	g/m	Conversion factor
N AIRO BAND 30Whi 1500x10/50m+P200/11 C	300	0,667
N AIRO BAND 30Whi 1500x5/50m+P200/11 C	150	0,333
N AIRO BAND Plus30Gry1500x15/33m+P200/11	450	1,000

ABBREVIATIONS

Abbreviation	Definition
General Abbreviations	
EN	European Norm (Standard)
EF	Environmental Footprint
GPI	General Programme Instructions
ISO	International Organization for Standardization
CEN	European Committee for Standardization
CPC	Central product classification
GHS	Globally harmonized system of classification and labelling of chemicals
GRI	Global Reporting Initiative
SVHC	Substances of Very High Concern
ND	Not Declared
JRC	Joint Research Centre (European Commission)
GWP	Global Warming Potential
GHG	Greenhouse gas
CF	Characterization factors

References

General Program Instructions for the International EPD® System. Version 5.0
PCR 2019:14 v2.0. Construction Product PCR (EN 15804: A2)
c-PCR-005 Thermal insulation products (EN 16783: 2024) Version: 2024-04-30

EN 15804
EN 15804:2012-04 + A2 2019: Sustainability of construction works — Environmental Product Declarations — Core rules for the product category of construction products.

EN 16783
EN 16783:2024-04: Thermal insulation products - Environmental Product Declarations (EPD) - Product Category Rules (PCR) complementary to EN 15804 for factory made and in-situ formed products.

ISO 14025
DIN EN ISO 14025:2011-10: Environmental labels and declarations — Type III environmental declarations — Principles and procedures

ISO 14040:2006
ISO 14040:2006: Environmental management — Life cycle assessment — Principles and framework

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

CEN/TR 15941:2010
CEN/TR 15941:2010: Sustainability of construction works - Environmental product declarations - Methodology for selection and use of generic data.

ISO 9001:2015
Quality management systems.

ISO 14001:2015
Environmental management systems.

EN 1602: 2013
EN 1602: 2013: Thermal insulating products for building applications. Determination of the apparent density

ISO 845:2006
ISO 845:2006: Cellular plastics and rubbers — Determination of apparent density

ISO 2896:2001
ISO 2896:2001: Rigid cellular plastics — Determination of water absorption

ISO 1798:2008
ISO 1798:2008: Flexible cellular polymeric materials — Determination of tensile strength and elongation at break

EN 16354:2019
Laminate floor coverings - Underlays - Specification, requirements, and test methods

EN 12664:2001
Thermal performance of building materials and products - Determination of thermal resistance by means of guarded hot plate and heat flow meter methods - Dry and moist products of medium and low thermal resistance

ISO 8301:1991
Thermal insulation — Determination of steady-state thermal resistance and related properties — Heat flow meter apparatus

DIN ISO 2896:1999-11
Rigid cellular plastics — Determination of water absorption

Sphera LCA for Experts
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Sphera
Sphera Solutions Gmbh. LCA for Experts 10 LCI documentation. GaBi Databases (sphera.com) + ecoinvent integrated v3.9 database Stuttgart, Echterdingen: Sphera Solutions Gmbh.

Eurostat
European Statistics: Recovery rates for packaging wastepaper and cardboard packaging for the European Union 27 countries 2014 http://ec.europa.eu/eurostat/home

CEN/TS 16516:2013
CEN TS 16516/, AgBB/, /ISO 16000-3/, /ISO 16000-6/, /ISO16000-9/, /ISO 16000-11/ Construction products. Assessment of release of dangerous substances. Determination of emissions into indoor air

VERSION HISTORY

Original Version of the EPD, 2025-12-03

EPD®

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