Environmental Product Declaration





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

EPD of multiple products, based on the average results of the product group:

NOMATEC® SILL INSULATION Combi

from

NMC



Programme:

The International EPD® System, www.environdec.com

Programme operator:

EPD International AB

EPD registration number:

EPD-IES-0010035

Publication date:

2025-01-07

Valid until:

2030-01-06

An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at 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:	info@environdec.com

Accountabilities for PCR, LCA and independent, third-party verification

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 1.3.4 CONSTRUCTION PRODUCTS; EN 16783:2024 Thermal insulation products C-PCR-005 (TO PCR 2024:14)

PCR review was conducted by: The Technical Committee of the International EPD® System. The review panel may be contacted via info@environdec.com. Review chair: Claudia A. Peña, University of Concepción, Chile. The review panel may be contacted via the Secretariat www.environdec.com/contact

Life Cycle Assessment (LCA)

NMC Sverige AB

Stenstorpsvägen 35 SE-305 75 Getinge

www.nmc.eu



Third-party verification

Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:

Third-party verifier: Matthew Fishwick, Fishwick Environmental Ltd

Approved by: The 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 registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same 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); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.





Company information

Owner of the EPD:

NMC Sverige AB

Contact:

NMC Sverige AB Stenstorpsvägen 35 SE-305 75 Getinge 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.

Name and location of production site(s):

NMC Sverige AB Stenstorpsvägen 35 SE-305 75 Getinge

EPD Type

This EPD is a multi-product EPD based on average results. There is no difference between the different impact factors per m³ of the various items, as the raw materials and manufacturing methods are identical. Only the size of the product delivered varies. To find out the values of the different impact factors per meter and reference refer to the conversion table on page 14 of this document. The life cycle analysis will be carried out on weighted average of the production volumes of all NOMATEC® SILL INSULATION Combi references.

Product information

Product name:

NOMATEC® SILL INSULATION Combi

Product description:

NOMATEC® SILL INSULATION Combi consists of an extruded age-resistant polyethylene foam with closed cells and a laminated air and vapour tight polyethylene film with a 400 mm overlap which provides additional protection against air leaks and moisture. The product is used as an insulating membrane between the foundation and sill, where capillary moisture protection and airtightness is needed. It provides a very good air seal and effectively prevents moisture migration from the concrete slab to the sill.





The NOMATEC® SILL INSULATION Combi range is available in thicknesses from 5, 7 and 10 mm.

NOMATEC® SILL INSULATION Combi is sold under several item numbers, but it's the same product that can come in different sizes and is sometimes packaged differently depending on the customer.

NOMATEC® SILL INSULATION Combi is CE marked and approved according to EN 14909:2012 Flexible sheets for waterproofing.

TECHNICAL DATA ACCORDING TO EN 14909:2012

Properties	Norm	Unit	Value
Thickness	SP 1116	mm	7
Density	ISO 845	kg/m³	30
Water tightness	EN 1296 / EN 1928	n/a	Pass
Water tightness after artificial aging	EN 1296 / EN 1928	n/a	Pass
Alkali resistance	EN 1296 / EN 1928	n/a	Pass

UN CPC code:

369

Geographical scope:

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

LCA information

Functional Unit:

1 m³ (30 kg/m³) of NOMATEC® SILL INSULATION Combi.

Reference service life:

50 years

Database(s) and LCA software used:

The LCA and results were calculated using LCA for Expert 10.9 and its content version 2024. 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.

Geographical and temporal representativeness of primary data

The primary data collected relating to the manufacture of the product studied are representative of production in 2023 for the NMC Sweden site. The electricity mix used in Sweden is a specific process adapted to the only green electricity produced that has been used with a GWP impact of 0,0134 kg CO2e/kWh (35% Nuclear, 20% Hydro power, 20% PV, 25% Biomass). NMC Sweden buys its electricity with a certificate of origin guaranteeing that it is produced entirely from renewable energy sources.

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

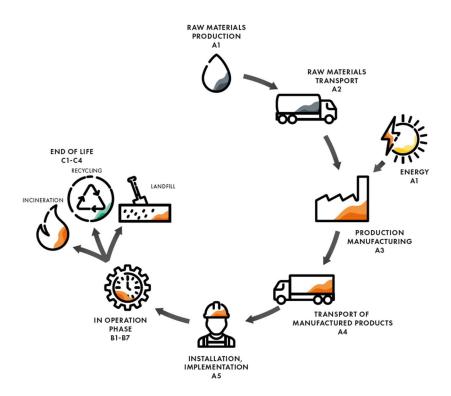




data. The neglected input flows are each below 1% of the total mass or the total impact of primary energy. In total, they constitute less than 5% of the overall mass or 5% of the total energy.

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.

System 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 NOMATEC® SILL INSULATION Combi, 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

NOMATEC® SILL INSULATION Combi is manufactured by incorporating the formulation ingredients into an extruder, adding a foaming agent, mixing, heating, and extruding the mixture through a die where





foam formation takes place. The product is then cooled with water, a polyethylene film is then laminated onto the foam before being cut to size, packaged, and stored.

- A4 transport

This step models the transport of NOMATEC® SILL INSULATION Combi 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	333	km
Fill rate mass payload capacity	10	%
Gross vehicle weight	34 - 40t gross weight / 27t payload capacity	t

- A5 Installation

NOMATEC® SILL INSULATION Combi is installed by hand and requires no special tools other than a knife. Packaging cartons brought to the site are estimated to be recycled, plastic bags are estimated sent to a waste incineration center. Auxiliary inputs have not been included in the life-cycle analysis.

Scenario information	Value	Unit
Auxiliary inputs for installation	Not concerned	kg
Water use	Not concerned	m ³
Use of other resources	Not concerned	kg
Quantitative description of energy type (regional mix) and consumption during installation process	Not concerned	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 0,6 kg per m3 of NOMATEC® SILL INSULATION COMBI 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 sent to municipal waste incineration plant.	kg
Direct emissions into ambient air, soil and water	Not concerned	kg

- Life stage in use, B1-B7

Once installed, NOMATEC® SILL INSULATION Combi 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 center (incinerator, recycling center and landfill) was estimated at 50 km.

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

NOMATEC® SILL INSULATION Combi 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	8,1 kg foam for recycling 15,3 kg foam for energy recovery
Elimination spécifiée par type	6,6 kg for final disposal (Landfill)
Scenario assumptions	Transport over 50 km

More information:

More product details : https://nmc-nomafoam.com/wp-content/uploads/sites/4/2017/11/nmc-nomatec-sill-insulation-tds-en-a4.pdf

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

NOMATEC® SILL INSULATION Combi is manufactured at NMC's Swedish site. The lifecycle analysis was carried out based on the weighted average of production volumes for all references. These results were then weighted according to the volumes produced to obtain the result for 1 m3 of NOMATEC® SILL INSULATION Combi foam. For the LCA calculation, no cut-off criteria were applied, and all elementary input processes as well as all energy and water inputs and waste outputs were considered. The primary data that were needed for the allocation of electricity, thermal energy, water, and wastes came from the various departments concerned and were collated in order to produce the LCA model. 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):





	Pro	duct st	age	prod	ruction cess age		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	A 1	A2	А3	A4	A5	B1	B2	В3	В4	В5	В6	В7	C1	C2	С3	C4	D
Modules declared	х	х	Х	Х	х	Х	Х	х	Х	х	х	Х	Х	х	х	х	×
Geography	EU	EU	SE	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU
Specific data used		4,5%		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products		0%		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites		0%		-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Content information: for 1 Functional Unit (1m³ of foam)

Product components	Weight (kg per functional unit)	Post-consumer material, weight-% (% per functional unit)	Biogenic material, weight-% and kg C/ per functional unit		
Polymer (LDPE)	27,8	0	0		
Various additives (pigments, stabilizers, processing agent)	0,9	0	0		
Foaming agent	3,0	0	0		
TOTAL	30,0	0	0		
Packaging materials	Weight (kg per functional unit)	Weight-% (versus the product)	Weight biogenic carbon, (kg C per functional unit)		
Cardboard	2,90	9,7	1,17		
Plastic film	0,37	1,2	0		
TOTAL	3,27	10,9	1,17		

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.





Dangerous substances			
from the candidate list of	EC No.	CAS No.	Weight-% per Functional Unit
SVHC for Authorisation			

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. NOMATEC® SILL INSULATION COMBI does not contain any substances of very high concern (SVHC).





Results of the environmental performance indicators

The result given is the weighted average based on the quantities produced.

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 m³ of NOMATEC® SILL INSULATION Combi											
Unit	A1-A3	A4	A 5	B1-B7	C1	C2	C3	C4	D		
kg CO ₂ eq.	8,10E+01	7,18E-01	2,44E+00	0,00E+00	0,00E+00	2,36E-01	5,01E+01	1,94E-01	-3,54E+01		
kg CO ₂ eq.	-4,19E+00	-1,70E-02	4,82E+00	0,00E+00	0,00E+00	-5,89E-03	1,62E-02	-5,34E-04	-1,50E-01		
kg CO ₂ eq.	3,12E-02	1,15E-02	1,64E-04	0,00E+00	0,00E+00	3,85E-03	4,74E-04	7,15E-04	-3,69E-03		
kg CO ₂ eq.	7,69E+01	7,12E-01	7,26E+00	0,00E+00	0,00E+00	2,34E-01	5,01E+01	1,94E-01	-3,56E+01		
kg CFC 11 eq.	1,16E-09	1,01E-13	5,73E-13	0,00E+00	0,00E+00	3,38E-14	3,19E-11	6,40E-13	-2,40E-10		
mol H⁺ eq.	1,29E-01	8,96E-04	4,62E-04	0,00E+00	0,00E+00	3,01E-04	7,81E-03	1,16E-03	-5,24E-02		
kg P eq.	1,47E-04	2,93E-06	3,73E-06	0,00E+00	0,00E+00	9,79E-07	2,26E-05	1,11E-04	-5,60E-05		
kg N eq.	3,91E-02	3,27E-04	1,79E-04	0,00E+00	0,00E+00	1,11E-04	1,83E-03	2,50E-04	-1,63E-02		
mol N eq.	4,16E-01	3,83E-03	1,98E-03	0,00E+00	0,00E+00	1,29E-03	3,11E-02	2,74E-03	-1,75E-01		
kg NMVOC eq.	9,92E-01	1,03E-03	5,84E-04	0,00E+00	0,00E+00	3,05E-04	5,20E-03	8,00E-04	-5,63E-02		
kg Sb eq.	8,53E-06	5,97E-08	6,60E-09	0,00E+00	0,00E+00	2,00E-08	5,35E-07	1,29E-08	-3,05E-06		
MJ	2,84E+03	9,03E+00	1,52E+00	0,00E+00	0,00E+00	3,02E+00	3,68E+01	3,28E+00	-8,90E+02		
m ³	7,90E+00	1,06E-02	2,32E-01	0,00E+00	0,00E+00	3,55E-03	4,86E+00	2,51E-02	-5,09E+00		
	kg CO ₂ eq. kg CO ₂ eq. kg CO ₂ eq. kg CO ₂ eq. kg CFC 11 eq. mol H ⁺ eq. kg P eq. kg N eq. mol N eq. kg NMVOC eq. kg Sb eq. MJ m³	Unit A1-A3 kg CO ₂ eq. 8,10E+01 kg CO ₂ eq. -4,19E+00 kg CO ₂ eq. 3,12E-02 kg CO ₂ eq. 7,69E+01 kg CFC 11 eq. 1,16E-09 mol H ⁺ eq. 1,29E-01 kg N eq. 3,91E-02 mol N eq. 4,16E-01 kg NMVOC eq. 9,92E-01 eq. 8,53E-06 MJ 2,84E+03 m³ 7,90E+00	Unit A1-A3 A4 kg CO ₂ eq. 8,10E+01 7,18E-01 kg CO ₂ eq. -4,19E+00 -1,70E-02 kg CO ₂ eq. 3,12E-02 1,15E-02 kg CO ₂ eq. 7,69E+01 7,12E-01 kg CFC 11 eq. 1,16E-09 1,01E-13 mol H ⁺ eq. 1,29E-01 8,96E-04 kg P eq. 1,47E-04 2,93E-06 kg N eq. 3,91E-02 3,27E-04 mol N eq. 4,16E-01 3,83E-03 kg NMVOC eq. 9,92E-01 1,03E-03 kg Sb eq. 8,53E-06 5,97E-08 MJ 2,84E+03 9,03E+00 m³ 7,90E+00 1,06E-02	Unit A1-A3 A4 A5 kg CO ₂ eq. 8,10E+01 7,18E-01 2,44E+00 kg CO ₂ eq. -4,19E+00 -1,70E-02 4,82E+00 kg CO ₂ eq. 3,12E-02 1,15E-02 1,64E-04 kg CO ₂ eq. 7,69E+01 7,12E-01 7,26E+00 kg CFC 11 eq. 1,16E-09 1,01E-13 5,73E-13 mol H ⁺ eq. 1,29E-01 8,96E-04 4,62E-04 kg P eq. 1,47E-04 2,93E-06 3,73E-06 kg N eq. 3,91E-02 3,27E-04 1,79E-04 mol N eq. 4,16E-01 3,83E-03 1,98E-03 kg NMVOC eq. 9,92E-01 1,03E-03 5,84E-04 kg Sb eq. 8,53E-06 5,97E-08 6,60E-09 MJ 2,84E+03 9,03E+00 1,52E+00 m³ 7,90E+00 1,06E-02 2,32E-01	Unit A1-A3 A4 A5 B1-B7 kg CO ₂ eq. 8,10E+01 7,18E-01 2,44E+00 0,00E+00 kg CO ₂ eq. -4,19E+00 -1,70E-02 4,82E+00 0,00E+00 kg CO ₂ eq. 3,12E-02 1,15E-02 1,64E-04 0,00E+00 kg CO ₂ eq. 7,69E+01 7,12E-01 7,26E+00 0,00E+00 kg CFC 11 eq. 1,16E-09 1,01E-13 5,73E-13 0,00E+00 mol H ⁺ eq. 1,29E-01 8,96E-04 4,62E-04 0,00E+00 kg P eq. 1,47E-04 2,93E-06 3,73E-06 0,00E+00 kg N eq. 3,91E-02 3,27E-04 1,79E-04 0,00E+00 mol N eq. 4,16E-01 3,83E-03 1,98E-03 0,00E+00 kg Sb eq. 8,53E-06 5,97E-08 6,60E-09 0,00E+00 MJ 2,84E+03 9,03E+00 1,52E+00 0,00E+00 m³ 7,90E+00 1,06E-02 2,32E-01 0,00E+00	Unit A1-A3 A4 A5 B1-B7 C1 kg CO ₂ eq. 8,10E+01 7,18E-01 2,44E+00 0,00E+00 0,00E+00 kg CO ₂ eq. -4,19E+00 -1,70E-02 4,82E+00 0,00E+00 0,00E+00 kg CO ₂ eq. 3,12E-02 1,15E-02 1,64E-04 0,00E+00 0,00E+00 kg CO ₂ eq. 7,69E+01 7,12E-01 7,26E+00 0,00E+00 0,00E+00 kg CFC 11 eq. 1,16E-09 1,01E-13 5,73E-13 0,00E+00 0,00E+00 mol H* eq. 1,29E-01 8,96E-04 4,62E-04 0,00E+00 0,00E+00 kg P eq. 1,47E-04 2,93E-06 3,73E-06 0,00E+00 0,00E+00 kg N eq. 3,91E-02 3,27E-04 1,79E-04 0,00E+00 0,00E+00 kg N eq. 4,16E-01 3,83E-03 1,98E-03 0,00E+00 0,00E+00 kg Sb eq. 8,53E-06 5,97E-08 6,60E-09 0,00E+00 0,00E+00 MJ 2,84E+03 9,03E+00 1,52E+00 0,	Unit A1-A3 A4 A5 B1-B7 C1 C2 kg CO ₂ eq. 8,10E+01 7,18E-01 2,44E+00 0,00E+00 0,00E+00 2,36E-01 kg CO ₂ eq. -4,19E+00 -1,70E-02 4,82E+00 0,00E+00 0,00E+00 -5,89E-03 kg CO ₂ eq. 3,12E-02 1,15E-02 1,64E-04 0,00E+00 0,00E+00 3,85E-03 kg CO ₂ eq. 7,69E+01 7,12E-01 7,26E+00 0,00E+00 0,00E+00 2,34E-01 kg CFC 11 eq. 1,16E-09 1,01E-13 5,73E-13 0,00E+00 0,00E+00 3,38E-14 mol H* eq. 1,29E-01 8,96E-04 4,62E-04 0,00E+00 0,00E+00 3,01E-04 kg P eq. 1,47E-04 2,93E-06 3,73E-06 0,00E+00 0,00E+00 9,79E-07 kg N eq. 3,91E-02 3,27E-04 1,79E-04 0,00E+00 0,00E+00 1,29E-03 kg N eq. 4,16E-01 3,83E-03 1,98E-03 0,00E+00 0,00E+00 3,05E-04 eq.	Unit A1-A3 A4 A5 B1-B7 C1 C2 C3 kg CO ₂ eq. 8,10E+01 7,18E-01 2,44E+00 0,00E+00 0,00E+00 2,36E-01 5,01E+01 kg CO ₂ eq. -4,19E+00 -1,70E-02 4,82E+00 0,00E+00 0,00E+00 -5,89E-03 1,62E-02 kg CO ₂ eq. 3,12E-02 1,15E-02 1,64E-04 0,00E+00 0,00E+00 3,85E-03 4,74E-04 kg CO ₂ eq. 7,69E+01 7,12E-01 7,26E+00 0,00E+00 0,00E+00 2,34E-01 5,01E+01 kg CFC 11 eq. 1,16E-09 1,01E-13 5,73E-13 0,00E+00 0,00E+00 3,38E-14 3,19E-11 mol H* eq. 1,29E-01 8,96E-04 4,62E-04 0,00E+00 0,00E+00 3,01E-04 7,81E-03 kg P eq. 1,47E-04 2,93E-06 3,73E-06 0,00E+00 0,00E+00 9,79E-07 2,26E-05 kg N eq. 3,91E-02 3,27E-04 1,79E-04 0,00E+00 0,00E+00 1,29E-03 3,11E-02	Unit A1-A3 A4 A5 B1-B7 C1 C2 C3 C4 kg CO ₂ eq. 8,10E+01 7,18E-01 2,44E+00 0,00E+00 0,00E+00 2,36E-01 5,01E+01 1,94E-01 kg CO ₂ eq. -4,19E+00 -1,70E-02 4,82E+00 0,00E+00 0,00E+00 -5,89E-03 1,62E-02 -5,34E-04 kg CO ₂ eq. 3,12E-02 1,15E-02 1,64E-04 0,00E+00 0,00E+00 3,85E-03 4,74E-04 7,15E-04 kg CO ₂ eq. 7,69E+01 7,12E-01 7,26E+00 0,00E+00 0,00E+00 2,34E-01 5,01E+01 1,94E-01 kg CFC 11 eq. 1,16E-09 1,01E-13 5,73E-13 0,00E+00 0,00E+00 3,38E-14 3,19E-11 6,40E-13 mol H* eq. 1,29E-01 8,96E-04 4,62E-04 0,00E+00 0,00E+00 3,01E-04 7,81E-03 1,16E-03 kg N eq. 3,91E-02 3,27E-04 1,79E-04 0,00E+00 0,00E+00 1,11E-04 1,83E-03 2,50E-04 mol N eq.		

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 2: It is recommended to always use the results of the modules, taking into consideration module C.

^{*} 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.





Additional mandatory and voluntary impact category indicators

	Results per Functional Unit 1 m³ of NOMATEC® SILL INSULATION Combi										
Indicator	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D	
GWP- GHG ¹	kg CO ₂ eq.	8,11E+01	7,29E-01	2,44E+00	0,00E+00	0,00E+00	2,39E-01	5,01E+01	1,95E-01	-3,54E+01	

Resource use indicators

	Results per Functional Unit 1 m³ of NOMATEC® SILL INSULATION Combi											
Indicator	Unit	A1-A3	A 4	A5	B1-B7	C1	C2	C3	C4	D		
PERE	MJ	3,91E+02	7,78E-01	3,27E-01	0,00E+00	0,00E+00	2,60E-01	2,12E+01	4,96E-01	-1,61E+02		
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	3,91E+02	7,78E-01	3,27E-01	0,00E+00	0,00E+00	2,60E-01	2,12E+01	4,96E-01	-1,61E+02		
PENRE	MJ	1,61E+03	9,03E+00	1,52E+00	0,00E+00	0,00E+00	3,02E+00	3,68E+01	3,28E+00	-8,90E+02		
PENRM	MJ	1,23E+03	0,00E+00	-2,13E+02	0,00E+00	0,00E+00	0,00E+00	-1,02E+03	0,00E+00	0,00E+00		
PENRT	MJ	2,84E+03	9,03E+00	-2,11E+02	0,00E+00	0,00E+00	3,02E+00	-9,80E+02	3,28E+00	-8,90E+02		
SM	kg	1,79E-01	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	m³	4,40E-01	8,67E-04	5,53E-03	0,00E+00	0,00E+00	2,90E-04	1,20E-01	7,49E-04	-1,74E-01		

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.

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 CO₂ is set to zero.





Waste indicators

	Results per Functional Unit 1 m³ of NOMATEC® SILL INSULATION Combi												
Indicator	Unit	A1-A3	A4	A 5	B1-B7	C1	C2	C3	C4	D			
Hazardous waste disposed	kg	8,50E-07	3,46E-10	6,85E-10	0,00E+00	0,00E+00	1,16E-10	9,86E-07	8,10E-10	-3,34E-07			
Non- hazardous waste disposed	kg	1,23E+00	1,48E-03	5,52E-01	0,00E+00	0,00E+00	4,93E-04	1,05E+00	6,57E+00	-3,40E-01			
Radioactive waste disposed	kg	6,52E-02	1,65E-05	4,12E-05	0,00E+00	0,00E+00	5,50E-06	4,64E-03	4,62E-05	-3,55E-02			

Output flow indicators

Results per Functional Unit 1 m³ of NOMATEC® SILL INSULATION Combi										
Indicator	Unit	A1-A3	A4	A 5	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	2,46E+00	0,00E+00	0,00E+00	0,00E+00	8,10E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,53E+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	1,02E+02	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	1,82E+02	0,00E+00	0,00E+00

Additional environmental impact indicators

Results per Functional Unit 1 m ³ of NOMATEC® SILL INSULATION Combi										
Indicator	Unit	A1-A3	A 4	A 5	B1-B7	C1	C2	С3	C4	D
Particulate matter	Diseas e incide nces	1,45E-06	9,27E-09	5,24E-09	0,00E+00	0,00E+00	2,99E-09	5,38E-08	1,20E-08	-4,53E-07
lonising radiation, human health	kBq U235 eq.	8,17E+00	2,39E-03	5,72E-03	0,00E+00	0,00E+00	7,98E-04	7,61E-01	6,34E-03	-5,83E+00
Ecotoxicity, freshwater	CTUe	1,41E+03	6,71E+00	1,05E+00	0,00E+00	0,00E+00	2,24E+00	1,19E+01	7,10E+00	-3,29E+02





Human toxicity, cancer	CTUh	3,55E-08	1,35E-10	4,27E-11	0,00E+00	0,00E+00	4,53E-11	8,20E-10	1,05E-10	-1,07E-08
Human toxicity, non- cancer	CTUh	1,19E-06	6,08E-09	3,69E-09	0,00E+00	0,00E+00	2,03E-09	1,28E-08	2,20E-09	-2,96E-07
Land Use	-	1,69E+02	4,44E+00	3,22E-01	0,00E+00	0,00E+00	1,49E+00	1,35E+01	5,57E-01	-9,44E+01

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.

Additional environmental information

NOMATEC® SILL INSULATION Combi 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 NOMATEC® SILL INSULATION Combi 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.

Conversion factors table and list of NOMATEC® SILL INSULATION Combi included in this EPD.

To find out the values of the different impact factors per meter, multiply the values in the results table by the conversion factor of the desired reference in the table below.





Item	Description	gr/m	Conversion factor	
3014615	N NTEC SILL 30Gry 195x7/25m+P540 C	107	0,00357	
3014619	N NTEC SILL 30Gry 200x10/40m+P620 C	139	0,00463	
3014620	N NTEC SILL 30Gry 240x7/25m+P620 C	126	0,00420	
3014622	N NTEC SILL 30Gry 240x10/40m+P620 C	152	0,00507	
3014625	N NTEC SILL 30Gry 260x10/40m+P620 C	158	0,00527	
3014627	N NTEC SILL 30Gry 280x10/40m+P620 C	165	0,00550	
3014628	N NTEC SILL 30Gry 280x7/25m+P620 C	135	0,00450	
3016072	N NTEC SILL 30Gry 260x7/25m+P620 C	131	0,00437	
3040859	N NTEC SILL 30Li 70x5/50m+P70/100 C	17	0,00057	
3040860	N NTEC SILL 30Li 95x5/50m+P95/100 C	23	0,00077	
3040861	N NTEC SILL 30Li 145x5/50m+P145/100 C	35	0,00117	
3040862	N NTEC SILL 30Li 195x5/50m+P195/100 C	47	0,00157	

References

General Program Instructions of the International EPD® System. Version 4.0.

Product category rules (PCR): PCR 2019:14 v1.3.4. Construction products (EN 15804:A2) Version 1.0 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 quidelines

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 14909:2012

EN 14909: 2012: Flexible sheets for waterproofing - Plastic and rubber damp proof courses - Definitions and characteristics

EN 1296:2000

EN 1296:2000: Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roofing - Method of artificial ageing by long term exposure to elevated temperature

EN 1928:2000

EN 1928:2000: Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Determination of watertightness

Sphera LCA for Experts

Sphera LCA for Experts 10.9 (GaBi) LCA for Experts Software-System and Database for Life Cycle Engineering Copyright © 1992-2024 Sphera Solutions Gmbh Version: 10.9.0.20 DB Schema 8007

Sphera

Sphera Solutions Gmbh. LCA for Experts 10 LCI documentation. <u>GaBi Databases (sphera.com)</u> + ecoinvent integrated v3.10 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

