Environmental Product Declaration

In accordance with ISO 14025:2006, EN 15804:2012+A2:2019/AC:2021 and ISO 21930:2017 for:

Polyproof Ultra Plus TS

from

Programme:	The International EPD System, www.environdec.com
Programme operator:	EPD International AB
Type of EPD:	EPD of a single product from Henkel AG & Co. KGaA
EPD registration number:	EPD-IES-0022929:001
Version date:	2025-07-08
Validity date:	2030-07-07
	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): *PCR 2019:14 Construction products, version 2.0.1 Published on 2025.06.05 valid until: 2030-04-07 and UN CPC code: 36330*
PCR review was conducted by: The Technical Committee of the International EPD System. See www.environdec.com for a list of members. Review chair: Claudia A. Peña, University of Concepción, Chile. The review panel may be contacted via the Secretariat www.environdec.com/support.

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 verifier: *Silvia Vilčeková, SILCERT, Ltd.* *silcertsro@gmail.com* 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. The current EPD complies also with ISO 21930:2017, Sustainability in buildings and civil engineering works -- Core rules for environmental product declarations of construction products and services.

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:

Henkel AG & Co. KGaA

Address:

Henkelstraße 67
40589 Düsseldorf
Deutschland

Contact: Julia Al-jenabi
henkelpolybit@henkel.com

Description of the organisation:
Henkel AG & Co. KGaA, commonly known as Henkel, is a German multinational chemical and consumer goods company headquartered in Düsseldorf, Germany.

Henkel Adhesive Technologies Construction is a division of Henkel which offers, among others, a wide choice of Self Adhesive HDPE Tape systems tailored to varied needs. This EPD is focused on the key components of HDPE tape. These components are mainly sold under the brand of Henkel Polybit.

For more information, please visit: www.henkelpolybit.com

Product-related or management system-related certifications: The plant, located Pune in India, holds certificates for ISO 9001.

Location of production site(s):
278/1/A, MIDC Phase III,
Chakan, Behind L&L Products,
Pune 410501, Maharashtra, India

PRODUCT INFORMATION

Product name: Polyproof Ultra Plus TS

Product identification: Polyproof Ultra Plus TS is a single-sided plain finish selfadhesive tape, protected with a release liner to be used in conjunction with the Polyproof Ultra FB system. The carrier is coated with a pressure sensitive adhesive on one side with excellent adhesion to the Polyproof Ultra membrane.

Typical Applications		Standards
Dimension	20m x 100mm, wt 2.8kg	
Nominal Thickness, mm	1	ASTM D 3652
Tensile strength [N/mm^2]	>10	ASTM D 412
Elongation at break, [%]	>10	ASTM D 412
Application temperature, [°C]	5 to 45	

UN CPC code: 36920

Product description: Polyproof Ultra Plus TS is used as Single-sided, plain finish, self-adhesive HDPE tape on the following applications: Corner detailing and repair of the Polyproof Ultra membrane as part of the Polyproof Ultra FB system. The application temperature should be between 5°C to 45°C. While application procedures may vary slightly depending upon site conditions.

CONTENT DECLARATION

Product content	Mass, kg	Post-consumer recycled material, mass-% of product	Biogenic material, mass-% of product	Biogenic material, kg C/declared unit
Organics, nonvolatiles	0.73	0	0	0
Inorganics	0.67	0	0	0
TOTAL	**1.4**	**0**	**0**	**0**

Packaging materials	Mass, kg	Mass-% (versus the product)	Biogenic material, kg C/declared unit
Paper and cardboard	4.59E-02	3.07E+00	2.30E-02
Wood	0.00E+00	0.00E+00	0.00E+00
Plastic	2.19E-02	1.49E+00	0
TOTAL	**6.78E-02**	**4.62E+00**	**2.30E-02**

Information on biogenic carbon content

Results per functional or declared unit		
BIOGENIC CARBON CONTENT	**Unit**	**QUANTITY**
Biogenic carbon content in product	kg C	0
Biogenic carbon content in packaging	kg C	2.30E-02

None of the components present in the final product are included in the "Candidate List of Substances of Very High Concern (SVHC) to the REACH Regulation (EC) No 1907/2006". The conversion factor to convert from kg carbon to kg CO_2 = 44 kg CO2/12 kg C.

LCA INFORMATION

Declared unit: 1 square meter (1 m^2) of packed HDPE tape, applied into the building with a mass per unit area of 1.4 kg/m^2.

The weight per 1 m^2 HDPE tape is 1.4 kg and the conversion factor to 1 kg is 0.714.

Time representativeness: All specific data related to the production plants and used for the study date from 2023.

Geographical scope: Global.

Database(s) and LCA software used: This EPD is based on specific data and system information. The primary inventory data has been directly obtained from Henkel and corresponds to the product

mentioned above. The product analysed in this study is manufactured in manufacturing plant located in Pune, India.

The secondary data has been extracted from the generic Ecoinvent version 3.11 database, included in the SimaPro v10.2. software which is internationally recognised. Wherever possible, inventory data related to specific countries or on its absence, from Global in general has been selected. This has been used for the stage of production and transport of raw materials, as well as for electricity generation or waste management processes, over which the manufacturer has no direct influence.

Description of system boundaries: Cradle-to-gate with modules C1-C4, module D and optional modules A4 and A5, covering the modules of extraction and processing of raw materials (A1), their transportation to the production plant (A2), the manufacturing process (A3), transport to construction site (A4), installation (A5), end of life (C1-C4) and potential benefits and loads from the reuse and recycling of the products at its end of life (D).

Product stage (A1-A3):

- Raw material supply (A1): this module considers the extraction and processing of raw materials used for the manufacture of the products.
- Transport of the raw materials (A2): this module consists of the transportation of all raw materials covered by module A1, from the extraction, production, and treatment site to the factory, considering the specific distances of each material supplier.
- Manufacturing of products (A3): this module refers to the production process of the self-adhesive HDPE tape in the production plants. The manufacturing of Polyproof Ultra TSD, TS, and Ultra Plus TS tapes begins with the production of high-density polyethylene (HDPE) film, which serves as the carrier layer. A pressure-sensitive adhesive is then applied to one or both sides of the film depending on the tape type. For tapes like Ultra Plus TS, a sanded surface is added for compatibility with sanded membranes, while others receive a plain or smooth finish. A silicon-coated release liner is laminated onto the adhesive side to protect it during handling. The finished material is then slit into rolls of the desired width and length, rewound, and packaged for distribution. The chosen packaging type is the most representative in terms of sales volume. It also serves as the standard reference for all other packaging options analyzed for this product.

Installation stage (A4-A5):

- Transport from factory to construction site (A4): this module considers the distribution of the product and its packaging to the construction site

Scenario information	Unit (by declared unit)
Fuel type and consumption of the vehicle	16-32 tons trucks, with 34 L per 100 km fuel consumption
Distance	2935 km
Capacity Utilization	100%
Bulk density	1333.34 kg/m^3
Volume capacity utilisation factor	1

- Installation (A5): this module considers the preparation of the product in order to be installed. No additional raw materials or processes are needed for installation.

- Additional technical information on module A5 according to EN 15804

Scenario information	Unit (by declared unit)
Auxiliary materials for installation	Polyproof Ultra Plus TS: none
Water use	Polyproof Ultra Plus TS: no consumption
Use of other resources	None
Energy consumption during the installation	Polyproof Ultra Plus TS: no consumption
Wastes and output flows as result of the waste treatment at the demolition point	No consumption
Direct emissions to air, soil and water	No applicable

Polyproof Ultra TS is a Single-sided, plain finish, self-adhesive HDPE tape, requiring a free of oil, water and dust. The presenceof any of these contaminants affects the adhesive properties of the tape. Cut the tape into the desired width and length and stick it on to the surface by removing the release film. Use an iron roller over the tape to enhance the bonding. No additional fastening materials such as glue, adhesives or mechanical fixation are needed for the installation.

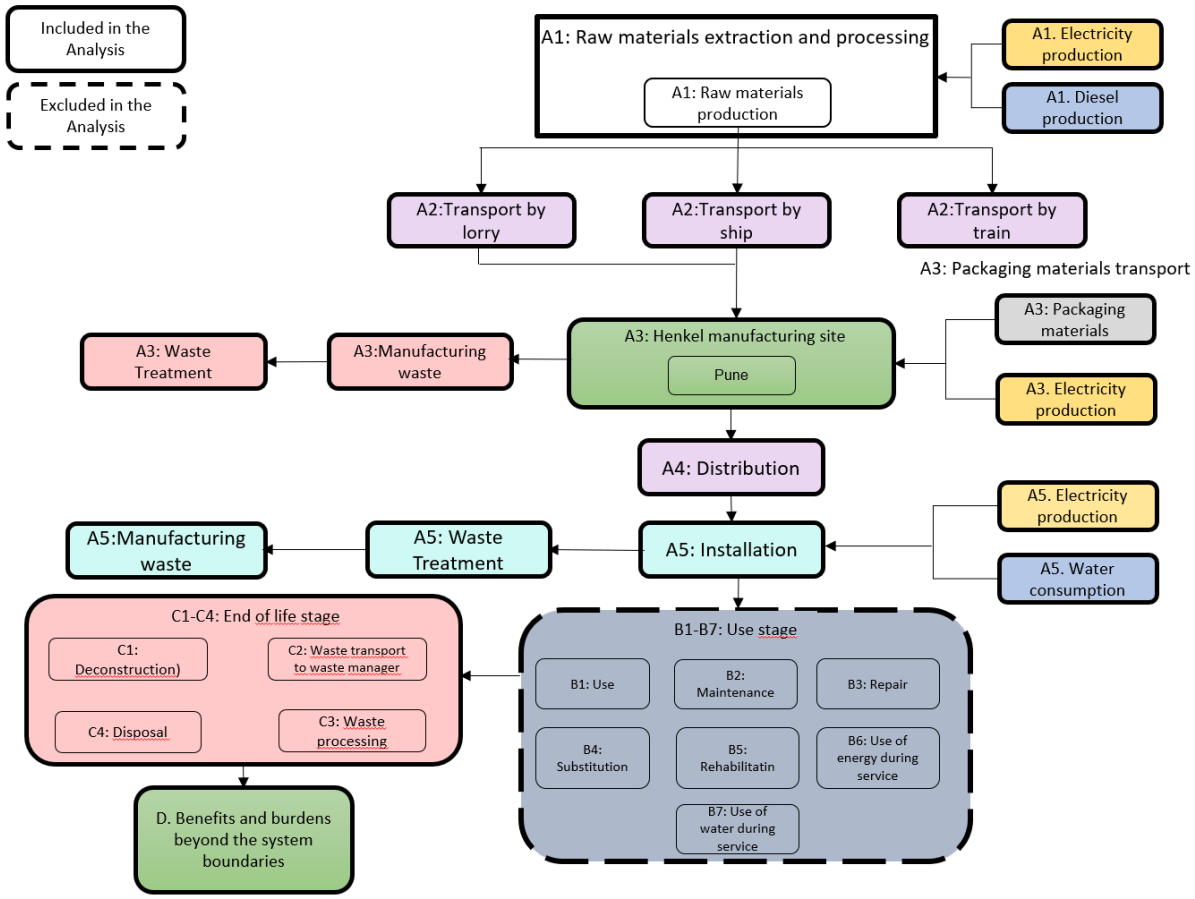
End of life stage (C):

- Deconstruction or demolition (C1): this stage considers the dismantling of the products after its use. The consumption of energy and natural resources is negligible for deconstruction of the end-of-life product, as demolition of membrane roofing is assumed to be done manually. Thus, the impacts of demolition are assumed zero.
- Transport to the waste processing site (C2): this module considers a default distance of 50 km between the building where the product was installed and the waste manager facility (landfill).
- Waste processing (C3): this module includes the reconditioning of the products waste for its reuse or recycling. However, in this study it is assumed that the products cannot be reused nor recycled after its end of useful life. Thus, there are not environmental impacts allocated to this module. On the other hand, following the "polluter pays" principle, if there were impacts due to the reuse/recycling of this product, they would not be attributed to its life cycle.
- Disposal (C4): this module includes the final discharge of waste that has not been destined for recovery or treatment processes. It has been assumed that the 100% of the product are finally disposed in the landfill after its end of useful life.

Benefits and loads beyond the system boundary (D): This module analyses the benefits and burdens related to the processes of recovery, reuse or recycling of waste from the products under study at their end of life, which could form part of the life cycle of a new product. In this the entire product is landfill so mule D is assumed as 0 contribution.
The scenarios for modules C1-C4 and D are realistic and representative of one of the most probable alternatives. The scenarios do not include processes or procedures that are not in current use or whose feasibility have not been demonstrated.
The module collects the most likely scenarios based on the best knowledge currently available. Considerations about the end of life of the representative average product:

Parameter	Units per declared Unit (kg)	Value (per 1.4 kg)
Waste collection process, specified by type	kg collected separately	0.00
	kg collected mixed with demolition waste	1.4
Recovery process waste, specified by type	kg for reuse	0.00
	kg for recycling	0.00
	kg for energy recovery	0.00
Waste disposal	kg to landfill	1.4
Considerations for scenarios development	Distance to waste manager (km)	50

Process flow diagram:



More information:

Company website for more information: https://www.henkel.de/

Name and contact information of LCA practitioner:

Henkel AG & Co. KGaA
Henkelstraße 67
40589 Düsseldorf
Deutschland

Cut-off rules: In accordance with the provisions of the Product Category Rules (PCR): PCR 2019:14 Construction products, version 2.0.1 Published on 2025.06.05 valid until: 2030-04-07, UNI-EN 15804:2012+A2:2020, at least 95% of total inflows (raw materials and energy) and outflows per module have been considered. The packaging for the distribution of the products has also been included.

The "polluter pays" principle has been applied.

The following processes have not been included in the scope of the study:

- Manufacture of equipment used in production, buildings or any other assets.
- Business trips.
- Maintenance activities at the production plants and research and development sites.
- Transportation of personnel to and within the plants.
- Diffuse particle emissions during the transport and storage of raw materials.

The hypotheses made during the study are detailed below:

- All the primary data used in this study correspond to 2023.
- Regarding the transport of raw materials (module A2), specific distances have been introduced by supplier and material.
- The plant of Pune in India uses electricity production mix. For this reason, the Ecoinvent database has been used to model the electricity production mix.

Source	Pune
GWP-GHG (kg CO2 eq./kWh)	1.29

- For the transport of waste from production plant, specific distances have been introduced for each waste management facility.
- For the distribution to the customer site, Henkel has indicated that the manufacturing sites supply to a radius of 2935 km.
- The End-of-Life scenario for the products has been provided by Henkel, where it is assumed that the 100% goes to landfill.
- This EPD is based on specific data and system information

Data quality requirements: “Good" data quality has been obtained (3.80 out of 5). The method used to assess the representativeness of the data is found in “Table E.1 — Data quality level and criteria of the UN Environment Global Guidance on LCA database development” in the Annex E of the EN 15804+A2 standard.
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.

Process	Source type	Source	Reference year	Data category	Share of primary data, of GWP-GHG results for A1-A3
A1 module	Collected data	EPD Owner	2023	Primary data	11.9%
A2 module	Database	Ecoinvent v3.11	2023	Primary data	1.8%
A3 module	Collected data	EPD Owner	2023	Primary data	14.8%

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	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X
Geography	IN	IN	IN	GLO	GLO	ND	ND	ND	ND	ND	ND	ND	GLO	GLO	GLO	GLO	GLO
Primary data used	28%					-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	0%					-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	0%					-	-	-	-	-	-	-	-	-	-	-	-

ENVIRONMENTAL PERFORMANCE

LCA results of the product(s) - main environmental performance results

The environmental information related to the analysed products has been calculated with the SimaPro software version 10.2. As required by PCR 2019:14[1], the characterization factors indicated in Annex C of the EN 15804:2012+A2 standard have been used to estimate the potential environmental impacts (method EN 15804 + A2 Method V1.02 / EF 3.1 normalization and weighting set) . With respect to the results corresponding to the rest of the parameters under study, the following methodologies have been used: inventory data to calculate waste production, CED (Cumulative Energy Demand) to calculate energy use and inventory data for output flows. For the additional ISO 21930 indicators, TRACI (Tool for Reduction and Assessment of Chemicals and Other Environmental Impacts) and inventory data (for waste indicators) have been used.

The environmental results corresponding to the representative product of the waterproofing membrane family manufactured and commercialized under the brand Polybit are shown below. These are divided by modules, covering the stages defined above in the system boundary section (A1-A3+A4-A5+B1-B7+C1-C4+D), and considering all the impact categories required by the PCR 2019:14 Construction products, version 2.0.1.

Estimated impact results are only relative statements that do not indicate impact category endpoints, exceedances of assessed thresholds, safety margins, or risks.

Results obtained in both the product stage (modules A1-A3) and installation stage (modules A4-A5) should not be used without considering those results obtained in modules C1-C4. Regarding C4 module, locally and additional calculation will be necessary based on the local applicable waste treatment scenario.
All infrastructure and capital goods are excluded for all the upstream, core and downstream processes

[1] *Product Category Rules (PCR): PCR 2019:14 Construction products, version 2.0.1 Published on 2025.06.05 valid until: 2030-04-07.*

Mandatory impact category indicators according to EN 15804

Results per declared unit										
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1-B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-fossil	kg CO2 eq.	3.50E+00	8.97E-02	1.15E+00	MND	0.00E+00	7.19E-03	0.00E+00	4.47E-03	0.00E+00
GWP-biogenic	kg CO2 eq.	1.29E-02	2.05E-05	-1.29E-02	MND	0.00E+00	2.32E-06	0.00E+00	2.19E-06	0.00E+00
GWP-luluc	kg CO2 eq.	2.77E-03	4.20E-05	6.66E-04	MND	0.00E+00	3.24E-06	0.00E+00	2.54E-06	0.00E+00
GWP-Total	kg CO2 eq.	3.52E+00	8.97E-02	1.17E+00	MND	0.00E+00	7.19E-03	0.00E+00	4.47E-03	0.00E+00
ODP	kg CFC 11 eq.	1.20E-06	1.20E-09	1.01E-06	MND	0.00E+00	9.45E-11	0.00E+00	1.25E-10	0.00E+00
AP	mol H+ eq.	1.55E-02	7.97E-04	4.65E-03	MND	0.00E+00	2.74E-05	0.00E+00	3.13E-05	0.00E+00
EP-freshwater	kg P eq.	2.05E-03	8.49E-06	2.38E-04	MND	0.00E+00	7.86E-07	0.00E+00	3.91E-07	0.00E+00
EP-marine	kg N eq.	3.42E-03	2.23E-04	8.57E-04	MND	0.00E+00	9.31E-06	0.00E+00	1.20E-05	0.00E+00
EP-terrestrial	mol N eq.	3.27E-02	2.46E-03	9.00E-03	MND	0.00E+00	1.01E-04	0.00E+00	1.31E-04	0.00E+00
POCP	kg NMVOC eq.	1.17E-02	7.64E-04	4.87E-03	MND	0.00E+00	3.72E-05	0.00E+00	4.74E-05	0.00E+00
ADP-minerals and metals*	kg Sb eq.	9.78E-06	2.54E-07	7.76E-06	MND	0.00E+00	2.37E-08	0.00E+00	6.54E-09	0.00E+00
ADP-fossil*	MJ	5.43E+01	1.22E+00	2.56E+01	MND	0.00E+00	9.97E-02	0.00E+00	1.09E-01	0.00E+00
WDP*	m3	5.92E-01	5.12E-03	4.04E-01	MND	0.00E+00	4.63E-04	0.00E+00	4.77E-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									

** Disclaimer: 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.*

Additional mandatory and voluntary impact category indicators

Results per declared unit										
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1-B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP - GHG[3]	kg CO2 eq.	3.44E+00	8.93E-02	1.15E+00	MND	0.00E+00	7.15E-03	0.00E+00	4.44E-03	0.00E+00
PM	disease inc.	1.11E-07	6.17E-09	5.62E-08	MND	0.00E+00	5.64E-10	0.00E+00	7.20E-10	0.00E+00
IRP[2]	kBq U-235 eq	1.06E-01	8.97E-04	3.80E-02	MND	0.00E+00	8.03E-05	0.00E+00	6.55E-05	0.00E+00
ETP-fw[1]	CTUe	1.31E+01	1.98E-01	7.24E+00	MND	0.00E+00	1.83E-02	0.00E+00	7.92E-03	0.00E+00
HTP-c[1]	CTUh	7.95E-10	1.58E-11	5.02E-10	MND	0.00E+00	1.20E-12	0.00E+00	8.06E-13	0.00E+00
HTP-nc[1]	CTUh	2.39E-08	6.70E-10	8.80E-09	MND	0.00E+00	6.17E-11	0.00E+00	1.81E-11	0.00E+00
SQP[1]	Pt	1.06E+01	6.02E-01	3.64E+00	MND	0.00E+00	5.86E-02	0.00E+00	2.15E-01	0.00E+00

PM = Particulate matter; IRP = Ionizing radiation, human health; ETP-fw = Ecotoxicity freshwater - organic; HTP-c = Human health, carcinogenic effects; HTP-nc = Human health, non-carcinogenic effects; SQP = Land use; NR = Non relevant

[1]The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.

[2]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 nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator

[3]The indicator includes all greenhouse gases included in GWP-total but excludes biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. This indicator is thus almost equal to the GWP indicator originally defined in EN 15804:2012+A1:2013

Resource use indicators

Results per declared unit										
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1-B7**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	MJ	-4.19E+00	1.55E-02	6.68E+00	MND	0.00E+00	1.39E-03	0.00E+00	1.02E-03	0.00E+00
PERM	MJ	6.04E+00	0.00E+00	-6.04E+00	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	1.84E+00	1.55E-02	6.45E-01	MND	0.00E+00	1.39E-03	0.00E+00	1.02E-03	0.00E+00
PENRE	MJ	5.47E+01	1.29E+00	2.76E+01	MND	0.00E+00	1.06E-01	0.00E+00	3.34E+00	0.00E+00
PENRM	MJ	3.29E+00	-6.35E-02	0.00E+00	MND	0.00E+00	0.00E+00	0.00E+00	-3.23E+00	0.00E+00
PENRT	MJ	5.80E+01	1.29E+00	2.76E+01	MND	0.00E+00	1.06E-01	0.00E+00	1.16E-01	0.00E+00
SM	kg	0.00E+00	0.00E+00	0.00E+00	MND	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	MND	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	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	1.72E-02	1.55E-04	1.07E-02	MND	0.00E+00	1.39E-05	0.00E+00	1.14E-04	0.00E+00
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									

Waste indicators

Results per declared unit										
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1-B7**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste disposed	kg	3.93E-04	7.87E-06	3.18E-04	MND	0.00E+00	6.74E-07	0.00E+00	6.98E-07	0.00E+00
Non-hazardous waste disposed	kg	2.77E-01	4.65E-02	8.01E-01	MND	0.00E+00	4.63E-03	0.00E+00	7.14E-01	0.00E+00
Radioactive waste disposed	kg	2.89E-05	2.20E-07	9.42E-06	MND	0.00E+00	1.97E-08	0.00E+00	1.60E-08	0.00E+00

Output flow indicators

Results per declared unit										
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	MND	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	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy, electricity	MJ	0.00E+00	0.00E+00	0.00E+00	MND	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	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Additional ISO 21930 mandatory impact categories and indicators

Results per declared unit										
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1-B7**	**C1**	**C2**	**C3**	**C4**	**D**
High-Level radioactive waste	kg	2.89E-05	2.20E-07	9.42E-06	MND	0.00E+00	1.97E-08	0.00E+00	1.60E-08	0.00E+00
Intermediate/low-level radioactive waste	kg	0.00E+00	0.00E+00	0.00E+00	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Global warming potential (GWP 100)	kg CO2 eq	3.46E+00	8.85E-02	1.14E+00	MND	0.00E+00	7.09E-03	0.00E+00	4.36E-03	0.00E+00
Ozone depletion potential (ODP)	kg CFC-11 eq	1.08E-06	1.26E-09	9.13E-07	MND	0.00E+00	9.96E-11	0.00E+00	1.31E-10	0.00E+00
Eutrophication potential (EP)	kg N eq	1.73E-03	1.20E-04	4.60E-04	MND	0.00E+00	4.96E-06	0.00E+00	6.41E-06	0.00E+00
Acidification potetential (AP)	kg SO2 eq	1.37E-02	6.92E-04	4.28E-03	MND	0.00E+00	2.48E-05	0.00E+00	2.83E-05	0.00E+00
Photochemical oxidant creation potential (POCP)	kg O3 eq	1.82E-01	1.41E-02	5.17E-02	MND	0.00E+00	5.82E-04	0.00E+00	7.59E-04	0.00E+00

ABBREVIATIONS

Abbreviation	Definition
General Abbreviations	
EN	European Norm (Standard)
EPD	Environmental Product Declaration
EF	Environmental Footprint
GPI	General Programme Instructions
ISO	International Organization for Standardization
LCA	Life Cycle Assessment
PCR	Product Category Rules
c-PCR	Complementary Product Category Rules
CEN	European Committee for Standardization
CLC	Co-location centre
CPC	Central product classification
GHS	Globally harmonized system of classification and labelling of chemicals
GRI	Global Reporting Initiative
Environmental Impact Indicators (EN 15804)	
GHG	Greenhouse gas
GWP	Global Warming Potential (kg CO_2 eq.)
GWP-fossil	Global Warming Potential from fossil sources (kg CO_2 eq.)
GWP-biogenic	Global Warming Potential from biogenic sources (kg CO_2 eq.)
GWP-luluc	Global Warming Potential from land use and land use change (kg CO_2 eq.)
GWP-total	Total Global Warming Potential (kg CO_2 eq.)
GWP-GHG	Global Warming Potential for greenhouse gases (kg CO_2 eq.)
ODP	Ozone Depletion Potential (kg CFC-11 eq.)
AP	Acidification Potential (mol H^+ eq.)
EP	Eutrophication Potential
EP-freshwater	Freshwater eutrophication potential (kg P eq.)
EP-marine	Marine eutrophication potential (kg N eq.)
EP-terrestrial	Terrestrial eutrophication potential (mol N eq.)
POCP	Photochemical Ozone Creation Potential (kg NMVOC eq.)
ADP	Abiotic Depletion Potential
ADP-minerals&metals	Abiotic depletion potential for non-fossil resources (kg Sb eq.)
ADP-fossil	Abiotic depletion potential for fossil resources (MJ)
WDP	Water Deprivation Potential (m^3)
Resource Use Indicators	
PERE	Use of renewable primary energy excluding renewable primary energy resources used as raw materials (MJ)
PERM	Use of renewable primary energy resources used as raw materials (MJ)
PERT	Total use of renewable primary energy resources (MJ)
PENRE	Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials (MJ)
PENRM	Use of non-renewable primary energy resources used as raw materials (MJ)
PENRT	Total use of non-renewable primary energy resources (MJ)
SM	Use of secondary material (kg)
RSF	Use of renewable secondary fuels (MJ)
NRSF	Use of non-renewable secondary fuels (MJ)
FW	Use of net fresh water (m^3)
Waste Indicators	
HW	Hazardous Waste (disposed) (kg)
NHW	Non-Hazardous Waste (disposed) (kg)
RW	Radioactive Waste (disposed) (kg)
Output Flow Indicators	
CFR	Components for Reuse (kg)
MR	Material for Recycling (kg)

MER	Materials for Energy Recovery (kg)
EEE	Exported Energy, Electricity (MJ)
EET	Exported Energy, Thermal (MJ)
Lifecycle Stages / Modules	
A1	Raw material supply
A2	Transport
A3	Manufacturing
A4	Transport to site
A5	Construction/Installation
B1	Use
B2	Maintenance
B3	Repair
B4	Replacement
B5	Refurbishment
B6	Operational energy use
B7	Operational water use
C1	Deconstruction/Demolition
C2	Transport to waste processing
C3	Waste processing
C4	Disposal
D	Reuse-Recovery-Recycling potential
Other Relevant Terms	
SVHC	Substances of Very High Concern
EC No.	European Community Number
CAS No.	Chemical Abstracts Service Number
MJ	Megajoule
kg	Kilogram
m^3	Cubic Meter
NMVOC	Non-Methane Volatile Organic Compounds
Sb eq.	Antimony Equivalents
P eq.	Phosphorus Equivalents
N eq.	Nitrogen Equivalents
CFC-11 eq.	Chlorofluorocarbon-11 Equivalents
CO_2 eq.	Carbon Dioxide Equivalents
kg C	Kilograms of Carbon
kg CO_2 eq.	Kilograms of Carbon Dioxide Equivalent
ND	Not Declared

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REFERENCES

- General Programme Instructions of the International EPD® System. Version 5.0.1.
- Product Category Rules PCR 2019:14 Construction products, version 2.0.1 Published on 2025.06.05 valid until: 2030-04-07, based on the European standard UNI-EN 15804:2012+A2:2020.
- UNI-EN ISO 14040:2006 – Environmental management – Life Cycle Assessment – Principles and framework.
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VERSION HISTORY

Original Version of the EPD, 2025-07-08

This document corresponds to the first version of the EPD of the Polyproof Ultra Plus TS product.

EPD
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