Declaration Owner

Prihoda® s.r.o
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Product:

Prihoda® tailor-made fabric ducting and diffusers

- NMSre
- PMSre

Declared Unit

One (1) square meter of substantial materials used to produce the duct surface area of any single duct section of the ductwork.

EPD Number and Period of Validity

SCS-EPD-10469
EPD Valid August 1, 2025 through July 30, 2030

Product Category Rule

PCR 2019:14. Construction products (EN 15804+A2) v2.0.1. EPD International. Published 06-05-2025. Valid until 04-07-2030.

C-PCR-011. Substantial Materials for Air Ducts (to PCR 2019:14) v1.0.0. EPD International. Valid until July 2026.

This EPD conforms to ISO 14025:2006 and EN 15804:2012+A2: 2019/AC:2021

Program Operator

SCS Global Services
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An EPD may be updated or depublished if conditions change. To find the latest version of the EPD and to confirm its validity, see https://www.scsglobalservices.com/certified-green-products-guide

Declaration owner:	Prihoda® s.r.o
Address:	Za Radnici 476, 53901 Hlinsko, Czech Republic
Declaration Number:	SCS-EPD-10469
Date of Issue:	August 1, 2025
Declaration Validity Period:	EPD Valid August 1, 2025 through July 30, 2030
Program Operator:	SCS Global Services, 2000 Powell Street, Ste. 600, Emeryville, CA 94608 USA
Declaration URL Link:	https://www.scsglobalservices.com/certified-green-products-guide
General Program Instructions:	SCS Type III Environmental Declaration Program: Program Operator Manual. V12.0. December 2023
Product(s):	NMSre and PMSre
Declared Unit:	One (1) square meter of substantial materials used to produce the duct surface area of any single duct section of the ductwork.
Product's Intended Application and Use:	transport and distribution of air
Product Warranty:	20 years
Markets of Applicability:	Global
EPD Type:	Product specific
EPD Scope:	Cradle-to-Gate with End-of-Life and Module D
Year(s) of Reported Manufacturer Primary Data:	2024
LCA Software & Version Number:	OpenLCA v 2.4.0
LCI Database(s) & Version Number:	Ecoinvent v3.11 EN 15804 Add-on
LCIA Methodology & Version Number:	EF 3.1
Reference PCR Part A:	PCR 2019:14. Construction products (EN 15804+A2) v2.0.1. EPD International. Published 06-05-2025. Valid until 04-07-2025.
PCR review:	PCR review was conducted by: The Technical Committee of the International EPD System. See www.environdec.com for a list of members. Review chairs: Rob Rouwette (chair) Noa Meron (co-chair). The review panel may be contacted via the Secretariat www.environdec.com/contact
Reference PCR Part B	C-PCR-011. Substantial Materials for Air Ducts (to PCR 2019:14) v1.0.0. EPD International. Valid until July 2026.
C-PCR review	C-PCR review was conducted by: The Technical Committee of the International EPD System. See www.environdec.com for a list of members. Review chair: Gorka Benito IK GENIERIA. The review panel may be contacted via the Secretariat. www.environdec.com/contact
LCA Practitioner:	Lucas Wathen, SCS Global Services
Independent critical review of the LCA and data, according to ISO 14044 and the PCR:	☐ internal ☒ external
LCA Reviewer:	Lindita Bushi Lindita Bushi, Ph.D., Athena Sustainable Materials Institute
Independent verification of the declaration and data, according to ISO 14025 and the PCR:	☐ internal ☒ external
EPD Verifier:	Lindita Bushi Lindita Bushi, Ph.D., Athena Sustainable Materials Institute
Declaration Contents:	

Disclaimers: *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.*

Conformity: *This EPD conforms to ISO 14025:2006, and EN 15804.*

Ownership: *The EPD owner has the sole ownership, liability, and responsibility of the EPD.*

Accuracy: *Due to PCR constraints, this EPD provides estimations of potential impacts that are inherently limited in terms of accuracy.*

Comparability: *The PCR this EPD was based on was not written to support comparative assertions. EPDs based on different PCRs, or different calculation models, may not be comparable. When attempting to compare EPDs or life cycle impacts of products from different companies, the user should be aware of the uncertainty in the final results, due to and not limited to, the practitioner's assumptions, the source of the data used in the study, and the specifics of the product modeled. In accordance with EN 15804, EPDs are comparable only if they comply with the core PCR, use the same sub-category PCR where applicable, include all relevant information modules and are based on equivalent scenarios with respect to the context of construction works. The owner of the declaration shall be liable for the underlying information and evidence; SCS shall not be liable with respect to manufacturer information, life cycle assessment data, and evidence supplied or made available to SCS*

Abbreviations

Table 1. *List of Abbreviations used in this EPD*

Abbreviation	Meaning	Abbreviation	Meaning
CSI	Construction Specifications Institute	LCIA	Life Cycle Impact Assessment
EPA	Environmental Protection Agency	PCR	Product Category Rule
EPD	Environmental Product Declaration	PET	Polyethylene Terephthalate
EU w/o CH	Europe without Switzerland	RER	Europe
GHG	Greenhouse Gas	RoW	Rest of World
GLO	Global	UNSPSC	United Nations Standard Products and Services Code
LCA	Life Cycle Assessment		
LCI	Life Cycle Inventory		

1. Prihoda

Prihoda® s.r.o. are a medium-sized fully Czech-owned firm that specializes entirely on the production of fabric ducting and diffusers, designed for transport or distribution of air. Since establishing in 1994, Prihoda® s.r.o. has continued to deliver innovative products to customers around the globe and we are the first in the world to use fabric microperforations, negative pressure ducting, adjustable length duct parts and many other components. The specialty of Prihoda® s.r.o lies in providing tailor-made solution rather than producing ducting by meter. All of the ducting and diffusers are made from high quality materials, guaranteeing long term durability.

2. Product

2.1 PRODUCT DESCRIPTION

Prihoda® tailor-made fabric ducting and diffusers are assembled at the manufacturing facility in Hlinsko, Czech Republic. The product is a fabric air duct and diffuser, which is custom-made by the company to suit different industrial operations such as food processing facilities, chemical, textile or electronic industries, supermarkets and large retail stores. Prihoda® products facilitate the supply of air (air transfer) as well as air distribution/diffusion into the occupied zone. The air ducts and diffusers are constructed with 100% recycled polyester fabric and are available in 9 colors with fire resistance and antibacterial treatments available on request. The products are primarily sold in the Heating Ventilation and Air Conditioning (HVAC) sector in Germany, Czech Republic and other regions in Europe and North America. This EPD includes the NMSre and PMSre fabric air ducting and diffusers.

Figure 1. *Product Image for Prihoda® fabric air duct and diffusers.*

2.2 TECHNICAL SPECIFICATION

Table 2. *Specifications of the Prihoda® NMSre and PMSre products.*

Product Specification	Unit	NMSre	PMSre
Thickness	mm	0.31	0.31
Density	kg/m^2	0.23	0.20
Reactivity to Fire	-	B s1,d0 acc EN 13501-1:2010 UL/ULC/NFPA90a 25/50	
Tensile Strength	-	181- warp / 1090 weft acc. EN ISO 13934-1	
Operating Temperature for Fabric	°C	-50 to +110	
Fibrous Material Outflow	-	Clean room quality-non fiber shedding ISO 14644-1: Class 4	
Microbial Growth	-	Antimicrobial treatment not included in this LCA product scope	
Flexural Rigidity	Nmm2	Not applicable	

Prihoda's NMSre and PMSre products belong to the CSI code 23 31 16 for HVAC Ducts and Casing – Nonmetal Ducts and the UNSPSC code 40141901 for Fluid and Gas Distribution - Flexible Ducts.

2.3 FLOW DIAGRAM

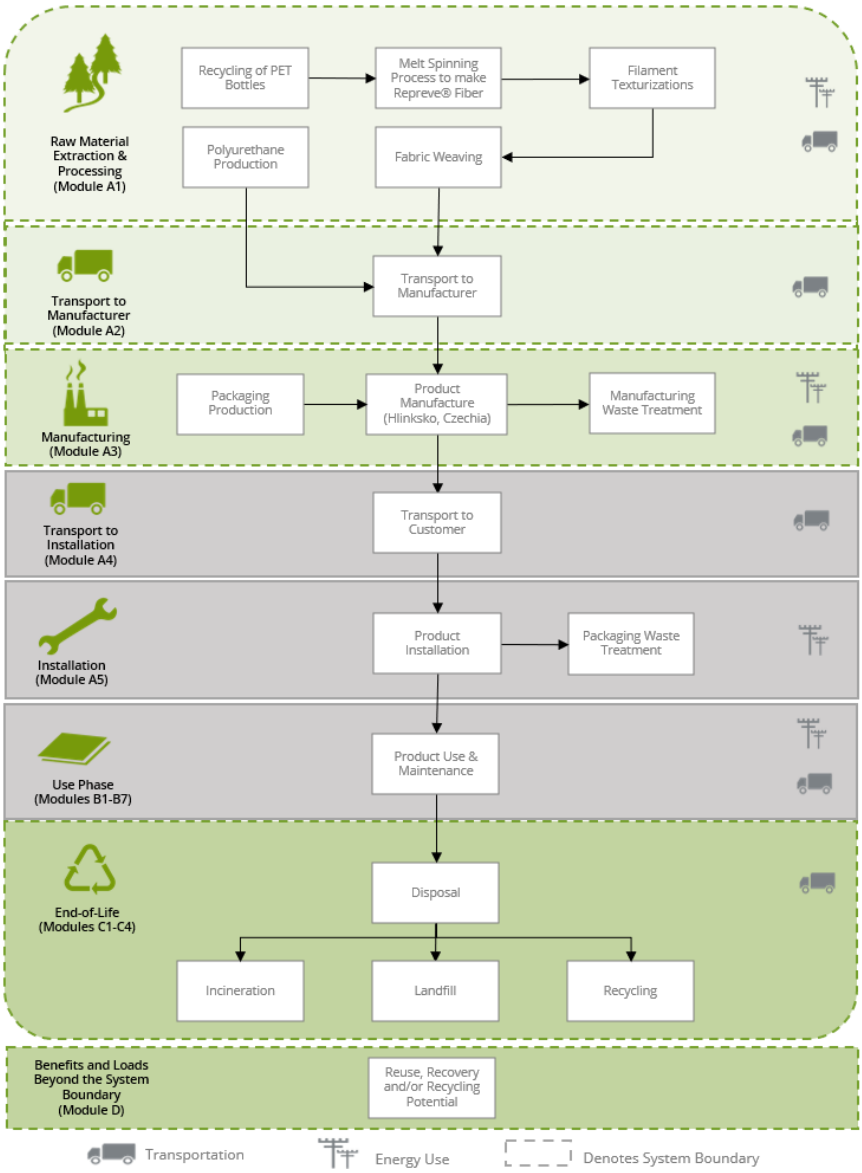

Figure 2. *Flow diagram and system boundaries for the life cycle of the Prihoda® air ducting and diffuser products.*

2.4 APPLICATION

Prihoda® fabric air ducting and diffusers are intended to facilitate the transport and delivery of air in indoor environments.

2.5 DECLARATION OF METHODOLOGICAL FRAMEWORK

The scope of the EPD is cradle-to-gate with end-of-life, including raw material extraction and processing; raw material transportation; product manufacture, and end-of-life

Manufacturing resource use was allocated to the products based on mass. Impacts from transportation were allocated based on the mass of material and distance transported.

Processes contributing greater than 1% of the total environmental impact indicator for each impact are included in the inventory. No known flows were deliberately excluded from this EPD.

2.6 MATERIAL COMPOSITION

Prihoda® fabric air ducting and diffuser products are made almost entirely from 100% recycled PET called REPREVE®. Further details on material composition of the products can be found in the tables below. As this REPEVE® contributes >10% of the impact to the overall GWP-GHG indicator results (see Section 4), the emissions intensity of this material, calculated using the GWP-GHG indicator, is declared as 1530 kgCO2e/tonne.

Table 3. *Material component summary for the **NMSre** product per declared unit.*

Raw Material	Mass Input (kg)	Mass Final Product (kg)	% Mass Final Product	% Post-Consumer Recycled Content	% Biogenic Material
REPREVE®	0.226	0.210	91%	100%	0%
Polyurethane	$2.70x10^{-2}$	$2.00x10^{-2}$	9%	0%	0%
Total:	**0.253**	**0.230**	**100%**	**91%**	**0%**

Table 4. *Material component summary for the **PMSre** product per declared unit.*

Raw Material	Mass Input (kg)	Mass Final Product (kg)	% Mass Final Product	% Post-Consumer Recycled Content	% Biogenic Material
REPREVE®	0.235	0.200	100%	100%	0%
Total:	**0.235**	**0.200**	**100%**	**100%**	**0%**

2.7 TRANSPORTATION

Raw materials required to produce the fabric air ducting and diffusers are delivered to the Prihoda® facility in Hlinsko, Czechia via truck and ship transport.

2.8 MANUFACTURE

Prihoda® fabric air ducting and diffusers are manufactured at their facility in Hlinsko, Czechia. Here, fabric is cut and micro-perforations are laser cut for engineered air distribution along the duct. Finished fabric components are sewn or zipped together to achieve the complete diffuser shape required for the project. As required by the PCR, the emissions factor for the purchased electricity used during manufacturing of the NMSre and PMSre products within the Czechia electric grid is reported as 0.664 $kgCO_2e/kWh$, using the GWP-GHG indicator.

2.9 PACKAGING

Prihoda® NMSre and PMSre products are packaged using polyethylene film and corrugate packaging. As module A5 is not included within the scope of this EPD, biogenic carbon uptake from use of corrugate packaging in module A3 has been balanced out with an equal emission of biogenic carbon.

Table 5. *Packaging material summary for the **NMSre** and **PMSre** products per declared unit.*

Packaging Material	Mass (kg)	% Mass	% Post-Consumer Recycled Content	Biogenic Material (kgC)
Polyethylene	$3.00x10^{-5}$	0.1%	0%	0.00
Cardboard	$2.00x10^{-2}$	99.9%	50%	$3.67x10^{-2}$
Total:	**$2.00x10^{-2}$**	**100%**	**50%**	**$3.67x10^{-2}$**

2.13 END-OF-LIFE

In the absence of primary data on end-of-life disposal of the fabric air duct and diffusers, an average disposal scenario was designed based on the primary regions in which the NMSre and PMSre products are sold. Regional statistics were sourced from the U.S. EPA, Eurostat, and a 2018 paper title *What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050*. Transportation the appropriate waste treatment facility was assumed to be 130km for waste bound for incineration and 80km for waste bound for non-incineration waste treatment, in line with the PCR.

Table 6. *End-of-Life summary for the Prihoda® fabric air duct and diffuser products.*

End-of-life		Unit	NMSre	PMSre
Assumptions for scenario development			Average disposal scenario based on waste treatment statistics from primary regions products sold into	
Collection process	Collected separately	kg	0.00	0.00
	Collected with mixed construction waste	kg	0.230	0.200
Recovery	Reuse	kg	0.00	0.00
	Recycling	kg	$5.11x10^{-2}$	$4.45x10^{-2}$
	Incineration	kg	$3.64x10^{-2}$	$3.17x10^{-2}$
	Incineration with energy recovery	kg	0.00	0.00
	Energy conversion	-	0.00	0.00
Disposal	Product of material for final deposition	kg	0.142	0.124
Removals of biogenic carbon (excluding packaging)		kg CO2	0.00	0.00

2.14 RE-USE. RECOVERY, AND RECYCLING POTENTIAL (Module D)

Module D evaluates the environmental impacts of net flows of recovered materials (recycled or reused) or recovered energy after said material/energy has left the product system. The primary raw material input to the NMSre and PMSre product is 100% recycled REPREVE® plastic, and only a portion of the finished product is recycled at end-of-life (see Table 6). As such, the analysis of module D indicates burden, not benefit. Note that this module D calculation only includes the product waste at end-of-life, and no additional internal scrap is considered a secondary material. Equation D.6 (below) from EN 15804 was used to calculate the impact for the substitution of virgin PET with recycled Prihoda NMSre/PMSre in a subsequent product system.

$$e_{module\ D1} = \sum i\ (M_{MRout}|_i - M_{MRin}) \times (E_{MR\ after\ EoW\ out}|_i - E_{VMSub\ out}|_i \times \frac{Q_{R\ out}}{Q_{Sub}}|_i)$$

Benefits from energy recovery of incinerated waste as assumed to be negligible given the small percentage of waste in the disposal scenario designed for this study that is likely to meet the energy efficiency requirements set in place by EN 15804.

3. Methodological Framework

3.1 DECLARED UNIT

The declared unit used in this study is 1m^2 of substantial material used to produce the duct surface area of any single duct section of ductwork, as commonly used by consumers and architects. The product's warranty is 20 years. Per the Part B PCR, flanges, hangers, supports, connection devices to diffusers related to the installation of the duct do not have to be considered in the declared unit.

Table 7. *Declared unit and reference flows for the Prihoda® fabric air duct and diffuser products.*

Name	Unit	NMSre	PMSre
Declared Unit	n/a	1m^2 of substantial material used to produce the duct surface area of any single duct section of ductwork	
Mass	kg	0.230	0.200

3.2 SYSTEM BOUNDARY

Table 8. *System boundary for the Prihoda® fabric air duct and diffuser product system*

	Product			Construction Process		Use							End-of-life				Resource Recovery
	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
	Raw material extraction and processing	Transport to manufacturer	Manufacturing	Transport	Construction - installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse, recovery and/or recycling potential
Module Declared	X	X	X	MND	MND	MND	MND	MND	MND	MND	MND	MND	X	X	X	X	X
Geography	Czechia			-		-							GLO				GLO
Share of Specific Data	86%			-		-	-	-	-	-	-	-	-	-	-	-	-

X = Module Included | MND = Module 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

3.3 ALLOCATION

Manufacturing resource use was allocated to the products based on mass. Impacts from transportation were allocated based on the mass of material and distance transported.

The post-consumer recycled material used to produce the NMSre and PMSre products was allocated using the recycled content allocation method (also known as the 100-0 cut off method). Using the recycled content allocation approach, system inputs with recycled content do not receive any burden from the previous life cycle other than reprocessing of the waste material. At end-of-life, materials which are recycled leave the system boundaries with no additional burden.

3.4 CUT-OFF RULES

According to the PCR, processes contributing greater than 1% of the total environmental impact for each indicator are included in the inventory. No data gaps were allowed which were expected to significantly affect the outcome of the indicator results.

3.5 DATA SOURCES

Primary data were provided by Prihoda® for their manufacturing facility in Hlinsko, Czechia. The principal source of secondary LCI data was the Ecoinvent v3.11 EN15804 Add-on database.

Table 9. *LCI datasets and associated databases used to model the Prihoda® fabric air duct and diffuser product system.*

Component	Dataset	Geography	Data Source	Publication Date
Product				
REPREVE®	Life Cycle Assessment of Recycled REPREVE® PET	China	Unifi	2024
	market for weaving, synthetic fibre | weaving, synthetic fibre | Cutoff, U	GLO	EI v3.11	2024
Polyurethane	market for polyurethane adhesive | polyurethane adhesive | Cutoff, U	GLO	EI v3.11	2024
	market for weaving, synthetic fibre | weaving, synthetic fibre | Cutoff, U	GLO	EI v3.11	2024
Packaging				
Cardboard	market for corrugated board box | corrugated board box | Cutoff, U	RER	EI v3.11	2024
Polyethylene	market for packaging film, low density polyethylene | packaging film, low density polyethylene | Cutoff, U	GLO	EI v3.11	2024
Transport				
Truck	market for transport, freight, lorry, 16-32 metric ton, diesel, EURO 4 | transport, freight, lorry, 16-32 metric ton, diesel, EURO 4 | Cutoff, U	RER	EI v3.11	2024
	market for transport, freight, lorry, 16-32 metric ton, diesel, EURO 4 | transport, freight, lorry, 16-32 metric ton, diesel, EURO 4 | Cutoff, U	RoW	EI v3.11	2024
Ship	market for transport, freight, sea, container ship, heavy fuel oil | transport, freight, sea, container ship, heavy fuel oil | Cutoff, U	GLO	EI v3.11	2024
Manufacture Inputs				
Electricity	market for electricity, medium voltage | electricity, medium voltage | Cutoff, U	CZ	EI v3.11	2024
Natural Gas	market for heat, district or industrial, natural gas | heat, district or industrial, natural gas | Cutoff, U	EU w/o CH	EI v3.11	2024
Water	market for tap water | tap water | Cutoff, U	EU w/o CH	EI v3.11	2024
Use Phase Inputs				
Washing	washing, drying and finishing laundry | washing, drying and finishing laundry | Cutoff, U**	GLO	EI v3.11	2024
Waste Outputs				
Waste to Landfill	market for inert waste, for final disposal | inert waste, for final disposal | Cutoff, U - RoW	RoW	EI v3.11	2024
Waste to Incineration	market for hazardous waste, for incineration | hazardous waste, for incineration | Cutoff, U - Europe without Switzerland	EU w/o CH	EI v3.11	2024
Waste to Recycling	Waste to Recycling/Waste/unspecified	n/a	EI v3.11	2024

**Dataset modified to reflect Chinese electricity generation mix.*
*** Dataset modified to remove energy input associated with finishing (ironing) laundry*

3.6. DATA QUALITY

The data quality assessment addressed the following parameters: time-related coverage, geographical coverage, technological coverage, precision, completeness, representativeness, consistency, reproducibility, sources of data, and uncertainty.

Table 10. *Data quality assessment.*

Data Quality Parameter	Data Quality Discussion
Time-Related Coverage: Age of data and the minimum length of time over which data is collected	The manufacturer provided primary data on product manufacturing for the Czechia facility on annual production for 2024. Representative datasets (secondary data) for upstream and background processes are generally less than 10 years old.
Geographical Coverage: Geographical area from which data for unit processes is collected to satisfy the goal of the study	The data used in the analysis provide the best possible representation available with current data. Electricity use for product manufacture is modeled using representative data modeled for the specific electricity grids represented in this study. Surrogate data used in the assessment are representative of global or European operations and are considered sufficiently similar to actual processes.
Technology Coverage: Specific technology or technology mix	For the most part, data are representative of the actual technologies used for processing, transportation, and manufacturing operations. Representative component datasets, specific to the type of material, are used to represent the actual processes, as appropriate.
Precision: Measure of the variability of the data values for each data expressed	Precision of results are not quantified due to a lack of data. Data collected for operations were typically averaged for one more years and over multiple operations, which is expected to reduce the variability of results.
Completeness: Percentage of flow that is measured or estimated	The LCA model included all known mass and energy flows for production of the products. In some instances, surrogate data used to represent upstream and downstream operations may be missing some data which is propagated in the model. No known processes or activities contributing to more than 1% of the total environmental impact for each indicator are excluded.
Representativeness: Qualitative assessment of the degree to which the data set reflects the true population of interest	Data used in the assessment represents typical or average processes as currently reported from multiple data sources and are therefore generally representative of the range of actual processes and technologies for production of these materials. Considerable deviation may exist among actual processes on a site-specific basis; however, such a determination would require detailed data collection throughout the supply chain back to resource extraction.
Consistency: Qualitative assessment of whether the study methodology is applied uniformly to the various components of the analysis	The consistency of the assessment is considered to be high. Data sources of similar quality and age are used; with a bias towards Ecoinvent v3.11 data where available. Different portions of the product life cycle are equally considered.
Reproducibility: Qualitative assessment of the extent to which information about the methodology and data values would allow an independent practitioner to reproduce the results reported in the study	Based on the description of the data and assumptions used, this assessment would be reproducible by other practitioners. All assumptions, models, and data sources are documented.
Sources of the Data: Description of all primary and secondary data sources	Data representing energy use at the Czechia facility represent a 12-month average and are considered of high quality due to the length of time over which these data are collected, as compared to a snapshot that may not accurately reflect fluctuations in production. For secondary LCI data, Ecoinvent v3.11 data are used.
Uncertainty of the Information: Uncertainty related to data, models, and assumptions	Uncertainty related to materials in the products and packaging is low. Actual supplier data for upstream operations was not available for all suppliers and the study relied upon the use of existing representative datasets. These datasets contained relatively recent data (<10 years) but lacked geographical representativeness. Uncertainty related to the impact assessment methods used in the study are high. The impact assessment methodology includes impact potentials, which lack characterization of providing and receiving environments or tipping points.

3.7 PERIOD UNDER REVIEW

A 12-month period from January 2024 through December 2024 serves as the period of review for this study.

3.8 COMPARABILITY AND BENCHMARKING

The PCR this EPD was based on was not written to support comparative assertions. EPDs based on different PCRs, or different calculation models, may not be comparable. When attempting to compare EPDs or life cycle impacts of products from different companies, the user should be aware of the uncertainty in the final results, due to and not limited to, the practitioner's assumptions, the source of the data used in the study, and the specifics of the product modeled. Additionally, EPDs of construction products may not be comparable if they do not comply with EN 15804+A2:2019.

Additionally, EPDs within the same product category but published in different EPD programs, 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 characterization factors); and be valid at the time of comparison.

3.9 ESTIMATES AND ASSUMPTIONS

The assessment relied on a number of assumptions related to material composition, processing, and end-of-life. The major assumptions used in the assessment are described below.

- The manufacturer of REPREVE® 100% recycled PET plastic, Unifi, commissioned an LCA of their product in 2024. Primary data on upstream production of REPREVE® plastic collected by Unifi for this report, combined with average datasets sourced from the Ecoinvent database were used to model the REPREVE® input sourced by Prihoda®.
- According to manufacturing experts at Prihoda®, all non-hazardous manufacturing waste produced at the Czechia facility is recycled. This includes paper, plastic, fabric, and metal waste.
- Transport of waste material at end-of-life is assumed to be 130km and 80km for incineration and non-incinerator waste treatment pathways respectively based on the Part A PCR.
- According to the manufacturer, there is no scrap loss on installation of the fabric air duct and diffusers.
- No specific data was available regarding product treatment at end-of-life. As such, disposal of product was modeled using regional waste management statistics for the primary markets the product is sold into: the United States, Europe, and Asia.

4. LCA: Results

Results of the Life Cycle Assessment are presented below. It is noted that LCA results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins or risks.

The following environmental impact category indicators are reported using characterization factors based on the EF 3.1 characterization methodology. Results reported in MJ are calculated using lower heating values. All values are rounded to three significant digits.

Table 11. *EF 3.1 LCIA Indicators included in this EPD.*

Impact Category	Abbreviation	Unit
Global warming potential	GWP-total GWP-fossil GWP-biogenic GWP-GHG	kg CO_2 eq
Ozone depletion potential	ODP	kg CFC-11 eq
Eutrophication potential	EP-freshwater EP-aquatic marine EP-terrestrial	kg P eq kg N eq mol N eq
Acidification potential	AP	mol H^+ eq
Photochemical ozone formation	POCP	kg NMVOC eq
Abiotic Depletion Potential, non-fossil resources*	ADP_E	kg Sb eq
Abiotic Depletion Potential, fossil fuels*	ADP_F	MJ eq
Water Use Deprivation Potential*	WDP	m^3 world eq deprived

**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 experience with the indicator.*

These impact categories are globally deemed mature enough to be included in Type III environmental declarations. Other categories are being developed and defined and LCA should continue making advances in their development. However, the EPD users shall not use additional measures for comparative purposes. Per the PCR, aggregating results of multiple life cycle stages is not presented, save for the production stage (modules A1-A3). However, as the scope of this EPD is cradle-to-gate with end-of-life, use of the aggregated production stage is discouraged without giving additional consideration to the results of the end-of-life sage (modules C1-C4). The following inventory parameters, specified by the PCR, are also reported.

Table 12. *Resource use and waste/output indicators included in this EPD.*

Resource Use Indicator	Abbreviation	Unit
Renewable primary resources used as an energy carrier	PERE	MJ, LHV
Renewable primary resources with energy content used as materials	PERM	MJ, LHV
Total use of renewable primary energy resources	PERT	MJ, LHV
Non-renewable primary resources used as an energy carrier	PENRE	MJ, LHV
Non-renewable primary resources with energy content used as material	PENRM	MJ, LHV
Total use of non-renewable primary energy resources	PENRT	MJ, LHV
Secondary materials	SM	kg
Renewable secondary fuels	RSF	MJ, LHV
Non-renewable secondary fuels	NRSF	MJ, LHV
Consumption of freshwater	FW	m^3
Waste/Output Indicator	**Abbreviation**	**Unit**
Hazardous waste disposed	HWD	kg
Non-hazardous waste disposed	NHWD	kg
Intermediate-low level radioactive waste	ILLRWD	kg
High-level radioactive waste	HLRWD	kg
Components for re-use	CRU	kg
Materials for recycling	MFR	kg
Materials for energy recovery	MER	kg
Exported electrical energy	EEE	MJ, LHV
Exported thermal energy	EET	MJ, LHV

All LCA results are stated to three significant figures in agreement with the PCR for this product and therefore the sum of the total values may not exactly equal 100%.

Table 13. *EF 3.1 LCA results for the Prihoda® **NMSre** product.*

Impact Category	Unit	Life Cycle Stage				D
		A1- A3 Total	C2	C3	C4	
GWP-total	kg CO_2 eq	**1.23**	$4.05x10^{-3}$	$9.47x10^{-5}$	$9.54x10^{-2}$	$8.78x10^{-2}$
GWP-fossil	kg CO_2 eq	**1.20**	$4.04x10^{-3}$	$9.42x10^{-5}$	$9.53x10^{-2}$	$8.77x10^{-2}$
GWP-biogenic	kg CO_2 eq	**$2.55x10^{-2}$**	$1.33x10^{-6}$	$4.03x10^{-7}$	$8.48x10^{-5}$	$6.57x10^{-5}$
GWP-GHG	kg CO_2 eq	**1.23**	$4.05x10^{-3}$	$9.47x10^{-5}$	$9.54x10^{-2}$	$8.78x10^{-2}$
ODP	kg CFC-11 eq	**$2.08x10^{-8}$**	$5.49x10^{-11}$	$2.64x10^{-12}$	$1.47x10^{-9}$	$5.16x10^{-7}$
EP-freshwater	kg P eq	**$8.64x10^{-4}$**	$4.41x10^{-7}$	$3.19x10^{-8}$	$2.59x10^{-5}$	$2.41x10^{-5}$
EP-marine	kg N eq	**$1.44x10^{-3}$**	$6.11x10^{-6}$	$8.43x10^{-8}$	$3.84x10^{-5}$	$4.61x10^{-5}$
EP-terrestrial	mol N eq	**$1.27x10^{-2}$**	$6.66x10^{-5}$	$8.56x10^{-7}$	$3.90x10^{-4}$	$5.23x10^{-4}$
AP	mol H^+ eq	**$5.76x10^{-3}$**	$1.71x10^{-5}$	$4.44x10^{-7}$	$1.50x10^{-4}$	$3.57x10^{-4}$
POCP	kg NMVOC eq	**$3.99x10^{-3}$**	$2.32x10^{-5}$	$4.65x10^{-7}$	$1.40x10^{-4}$	$3.97x10^{-4}$
ADP_E	kg Sb eq	**$1.61x10^{-6}$**	$6.18x10^{-9}$	$3.31x10^{-11}$	$4.70x10^{-8}$	$1.29x10^{-5}$
ADP_F	MJ eq	**13.7**	$5.52x10^{-2}$	$2.60x10^{-3}$	0.482	2.28
WDP	m^3 world eq	**0.295**	$3.00x10^{-4}$	$1.83x10^{-5}$	$9.46x10^{-3}$	$2.56x10^{-2}$

Table 14. *Resource use indicator results for the Prihoda® **NMSre** product.*

Impact Category	Unit	A1- A3 Total	C2	C3	C4	D
PERE	MJ, LHV	**0.969**	$7.80x10^{-4}$	$1.17x10^{-4}$	$1.93x10^{-2}$	$8.52x10^{-2}$
PERM	MJ, LHV	**0.340**	0.00	0.00	0.00	0.00
PERT	MJ, LHV	**1.31**	$7.80x10^{-4}$	$1.17x10^{-4}$	$1.93x10^{-2}$	$8.52x10^{-2}$
PENRE	MJ, LHV	**18.0**	$5.60x10^{-2}$	$2.75x10^{-3}$	0.500	2.41
PENRM	MJ, LHV	**0.00**	0.00	0.00	0.00	0.00
PENRT	MJ, LHV	**18.0**	$5.60x10^{-2}$	$2.75x10^{-3}$	0.500	2.41
SM	kg	**0.236**	0.00	0.00	0.00	0.00
RSF	MJ, LHV	**0.00**	0.00	0.00	0.00	0.00
NRSF	MJ, LHV	**0.00**	0.00	0.00	0.00	0.00
FW	m^3	**0.263**	$8.33x10^{-5}$	$8.14x10^{-6}$	$1.83x10^{-3}$	$2.44x10^{-2}$

Table 15. *Waste/Output indicator results for the Prihoda® **NMSre** product.*

Impact Category	Unit	A1- A3 Total	C2	C3	C4	D
HWD	kg	**$3.84x10^{-4}$**	0.00	0.00	0.00	0.00
NHWD	kg	**0.00**	0.00	0.00	0.179	0.00
ILLRWD	kg	**0.00**	0.00	0.00	0.00	0.00
HLRWD	kg	**0.00**	0.00	0.00	0.00	0.00
CRU	kg	**0.00**	0.00	0.00	0.00	0.00
MFR	kg	**$5.70x10^{-2}$**	0.00	0.00	$5.11x10^{-2}$	0.00
MER	kg	**0.00**	0.00	0.00	0.00	0.00
EEE	MJ, LHV	**0.00**	0.00	0.00	0.00	0.00
EET	MJ, LHV	**0.00**	0.00	0.00	0.00	0.00

Table 16. *EF 3.1 LCA results for the Prihoda® **PMSre** product.*

Impact Category	Unit	Life Cycle Stage				D
		A1- A3 Total	C2	C3	C4	
GWP-total	kg CO_2 eq	**0.990**	$3.53x10^{-3}$	$8.24x10^{-5}$	$8.31x10^{-2}$	$9.11x10^{-2}$
GWP-fossil	kg CO_2 eq	**0.964**	$3.52x10^{-3}$	$8.19x10^{-5}$	$8.30x10^{-2}$	$9.10x10^{-2}$
GWP-biogenic	kg CO_2 eq	**$2.65x10^{-2}$**	$1.16x10^{-6}$	$3.50x10^{-7}$	$7.38x10^{-5}$	$6.82x10^{-5}$
GWP-GHG	kg CO_2 eq	**0.990**	$3.53x10^{-3}$	$8.24x10^{-5}$	$8.31x10^{-2}$	$9.11x10^{-2}$
ODP	kg CFC-11 eq	**$1.32x10^{-8}$**	$4.78x10^{-11}$	$2.29x10^{-12}$	$1.28x10^{-9}$	$5.35x10^{-7}$
EP-freshwater	kg P eq	**$7.23x10^{-4}$**	$3.84x10^{-7}$	$2.77x10^{-8}$	$2.25x10^{-5}$	$2.50x10^{-5}$
EP-marine	kg N eq	**$1.18x10^{-3}$**	$5.33x10^{-6}$	$7.33x10^{-8}$	$3.34x10^{-5}$	$4.79x10^{-5}$
EP-terrestrial	mol N eq	**$1.05x10^{-2}$**	$5.80x10^{-5}$	$7.44x10^{-7}$	$3.40x10^{-4}$	$5.43x10^{-4}$
AP	mol H^+ eq	**$4.75x10^{-3}$**	$1.49x10^{-5}$	$3.86x10^{-7}$	$1.30x10^{-4}$	$3.71x10^{-4}$
POCP	kg NMVOC eq	**$3.21x10^{-3}$**	$2.02x10^{-5}$	$4.04x10^{-7}$	$1.20x10^{-4}$	$4.12x10^{-4}$
ADP_E	kg Sb eq	**$1.11x10^{-6}$**	$5.38x10^{-9}$	$2.88x10^{-11}$	$4.09x10^{-8}$	$1.33x10^{-5}$
ADP_F	MJ eq	**10.3**	$4.81x10^{-2}$	$2.26x10^{-3}$	0.420	2.36
WDP	m^3 world eq	**0.225**	$2.60x10^{-4}$	$1.59x10^{-5}$	$8.24x10^{-3}$	$2.66x10^{-2}$

Table 17. *Resource use indicator results for the Prihoda® **PMSre** product.*

Impact Category	Unit	A1- A3 Total	C2	C3	C4	D
PERE	MJ, LHV	**1.12**	$6.90x10^{-4}$	$1.02x10^{-4}$	$1.68x10^{-2}$	$8.84x10^{-2}$
PERM	MJ, LHV	**0.340**	0.00	0.00	0.00	0.00
PERT	MJ, LHV	**1.46**	$6.90x10^{-4}$	$1.02x10^{-4}$	$1.68x10^{-2}$	$8.84x10^{-2}$
PENRE	MJ, LHV	**14.0**	$4.88x10^{-2}$	$2.39x10^{-3}$	0.436	2.51
PENRM	MJ, LHV	**0.00**	0.00	0.00	0.00	0.00
PENRT	MJ, LHV	**14.0**	$4.88x10^{-2}$	$2.39x10^{-3}$	0.436	2.51
SM	kg	**0.245**	0.00	0.00	0.00	0.00
RSF	MJ, LHV	**0.00**	0.00	0.00	0.00	0.00
NRSF	MJ, LHV	**0.00**	0.00	0.00	0.00	0.00
FW	m^3	**0.206**	$7.26x10^{-5}$	$7.08x10^{-6}$	$1.60x10^{-3}$	$2.54x10^{-2}$

Table 18. *Waste/Output indicator results for the Prihoda® **PMSre** product.*

Impact Category	Unit	A1- A3 Total	C2	C3	C4	D
HWD	kg	**$3.34x10^{-4}$**	0.00	0.00	0.00	0.00
NHWD	kg	**0.00**	0.00	0.00	0.156	0.00
ILLRWD	kg	**0.00**	0.00	0.00	0.00	0.00
HLRWD	kg	**0.00**	0.00	0.00	0.00	0.00
CRU	kg	**0.00**	0.00	0.00	0.00	0.00
MFR	kg	**$4.95x10^{-2}$**	0.00	0.00	$4.45x10^{-2}$	0.00
MER	kg	**0.00**	0.00	0.00	0.00	0.00
EEE	MJ, LHV	**0.00**	0.00	0.00	0.00	0.00
EET	MJ, LHV	**0.00**	0.00	0.00	0.00	0.00

5. LCA: Interpretation

Contribution analysis of the LCIA results reveals that the primary driver of impact from the Prihoda® fabric air duct and diffuser product system is the production phase. Module A3 (manufacturing) is responsible for the largest impact in 7/13 of the assessed LCIA indicators, and module A1 (raw material extraction and processing) claims the top spot in the remaining 6/13. Digging deeper, the impact from manufacturing is largely driven by the energy consumption at the Czechia facility, both electricity and natural gas, to produce the NMSre and PMSre products. The primary contributing factor the A1 impact is upstream production of the REPREVE® recycled PET input, For the PMSre product, a small percentage of A1 impact also stems from the polyurethane input.

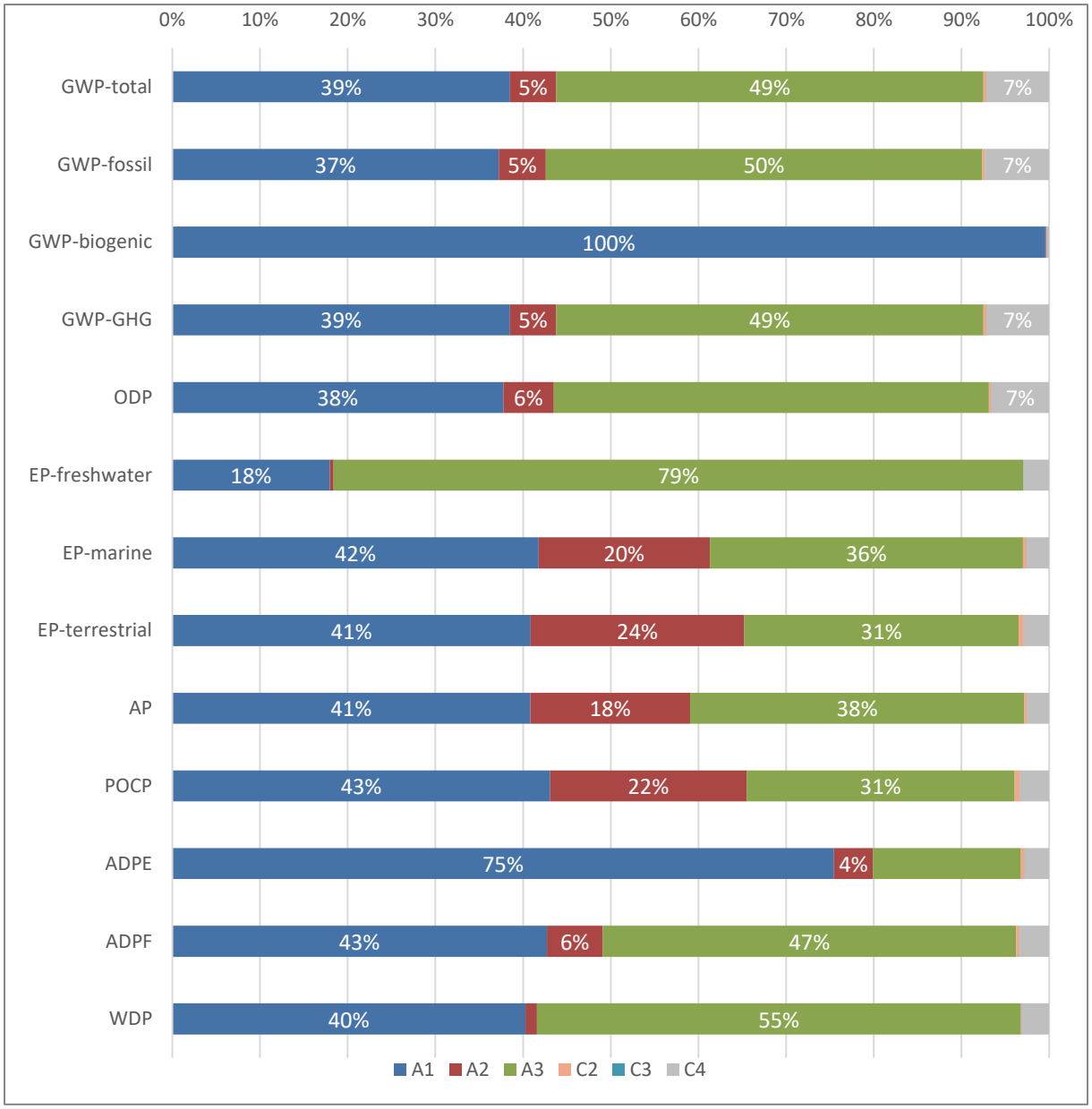

Figure 3. *Contribution analysis for the Prihoda® **NMSre** product.*

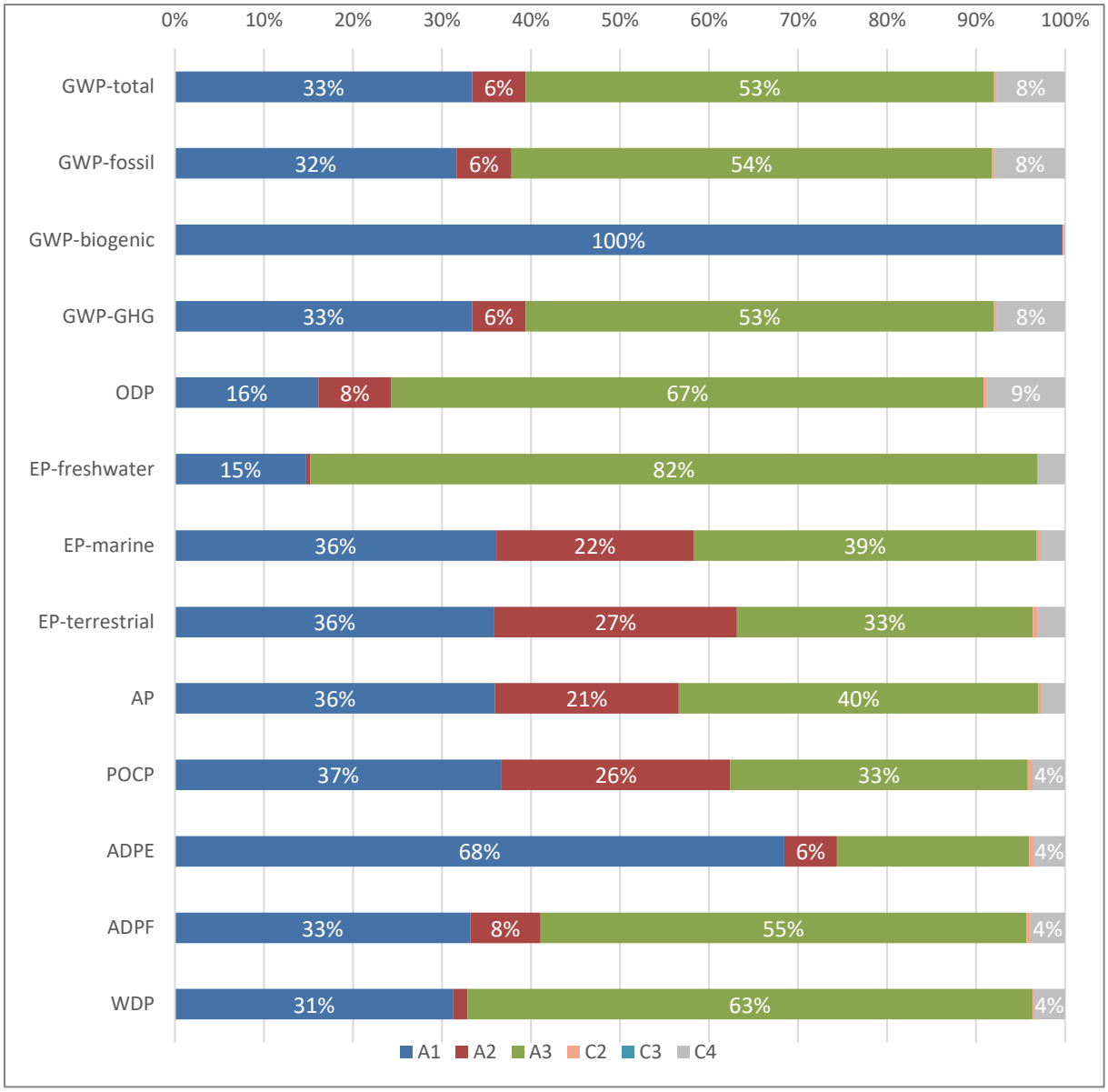

Figure 4. *Contribution analysis for the Prihoda® **PMSre** product.*

6. Additional Environmental Information

7.1 ENVIRONMENTAL ACTIVITIES AND CERTIFICATIONS

The recycled polyester fabric used by Prihoda® is certified to the REPREVE® standards, which ensure that the products are made with recycled fiber that is traceable, transparent and certifiably sustainable.

Prihoda® s.r.o has achieved Quality Certification ISO 9001 and Environmental certification ISO 14001. More information on the certifications earned by Prihoda® is available at https://www.prihoda.com/en/resources/certificates/

7.2 FURTHER INFORMATION

Further information on the product can be found on the manufacturer's website at www.prihoda.com/.

7. References

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- EN 13403 Ventilation for buildings – Non-metallic ducts – Ductwork made from insulated ductboards
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8. Version History

Table 21 provides a brief overview the changes made to the EPD for Prihoda's NMSre and PMSre products following the expiration of previous versions. Please note that this list is not exhaustive, and additional differences and nuances exist between versions

Table 19. *Version history of this EPD.*

Version	Publication Date	Description of Differences
Original Version	03/22/2016	n/a
V2	07/06/2020	▪ Differentiation between NMSre and PMSre products from single fabric-ducting products. ▪ Addition of (1) CO_2 LCIA indicators from the GHG Protocol and (2) suite of LCIA indicators from CML-IA.
V3	08/01/2025	▪ Cradle-to-grave scope adjusted to Cradle-to-gate with EoL and Module D. ▪ While the reference service life (RSL) is no longer relevant to this EPD, previous versions state an RSL of 25 years, which differs from the 20 year warranty noted in this EPD. ▪ Inclusion of primary data from Unifi, the manufacturer of REPREVE®. ▪ Substitution of TRACI, CML-IA, and GHG Protocol LCIA indicators with EF 3.1 indicators. ▪ Presentation of LCIA impacts switched from Upstream/Core/Downstream to information module based approach.

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