

ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH ISO 14025 AND ISO 21930:2017

SmartEPD-2025-052-0246-01

DuraCycle Door



Date of Issue:
Jan 21, 2025

Expiration:
Jan 21, 2030

Last updated:
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General Information

DuraFlex

899 Venture Blvd, Wooster, OH 44691

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Product Name:	DuraCycle Door
Functional Unit:	1 piece allowing passage, with the dimensions 3x7 ft
Declaration Number:	SmartEPD-2025-052-0246-01
Date of Issue:	January 21, 2025
Expiration:	January 21, 2030
Last updated:	January 21, 2025
EPD Scope:	Cradle to gate with other options A1 - A3, C1 - C4
Market(s) of Applicability:	North America

Organization Information

DuraServ Corp. specializes in providing high-quality products and services in the commercial & residential door industry. With over 23 years of experience, we have established ourselves as a trusted leader, known for our commitment to quality and innovation. Our locations stretch coast-to-coast so we can serve you where you are.

What sets DuraServ apart is our unwavering dedication to excellence. Our team of skilled professionals is committed to working closely with you to understand your specific requirements and provide tailored solutions that drive efficiency and safety in your operations. We offer exceptional customer support and service.

DuraFlex and DuraCycle is a division of DuraServ and we created the FIRST impactable sectional door and the first entry exit door made entirely of recycled materials. Our products can take a punch and are environmentally friendly.

DuraFlex and DuraCycle ARE innovation, and we will continue to bring new products to market that change the game for everyone.

We believe that building strong, long-lasting relationships with our clients is the cornerstone of our success. Whether you need assistance with product selection, installation, or ongoing maintenance, our team is here to support you every step of the way.

Further information can be found at: <https://duraservcorp.com/about-us/>

Limitations, Liability, and Ownership

Environmental declarations from different programs (ISO 14025) may not be comparable. Comparison of the environmental performance of products using EPD information shall be based on the product's use and impacts at the building level, and therefore EPDs may not be used for comparability purposes when not considering the whole building life cycle. EPD comparability is only possible when all stages of a life cycle have been considered. However, variations and deviations are possible. Example of variations: Different LCA software and background LCI datasets may lead to differences results for upstream or downstream of the life cycle stages declared. The EPD owner has sole ownership, liability, and responsibility for the EPD.

Reference Standards

Standard(s):	ISO 14025 and ISO 21930:2017
Core PCR:	Smart EPD® Part A Product Category Rules for Building and Construction Products and Services v1.01 v.1.01 Date of issue: January 15, 2024 Valid until: July 15, 2025
Sub-category PCR review panel:	 Contact Smart EPD for more information.
General Program Instructions:	 Smart EPD General Program Instructions v.1.0, November 2022

Verification Information

ACLCA PCR Guidance Version:	1.0
ACLCA PCR Conformance Level:	Transparency
LCA Author/Creator:	 Olivia Fritz  TrueNorth Collective LLC  olivia.fritz@truenorthcollective.net
EPD Program Operator:	 Smart EPD  info@smartepd.com  www.smartepd.com  585 Grove St., Ste. 145 PMB 966, Herndon, VA 20170, USA
Verification:	Independent critical review of the LCA and data, according to ISO 14044 and ISO 14071: External  Alison Conroy  Independent Contractor  alisonleeconroy@gmail.com Independent external verification of EPD, according to ISO 14025 and reference PCR(s): External  Alison Conroy  Independent Contractor  alisonleeconroy@gmail.com

Product Information

Functional Unit:	1 piece allowing passage, with the dimensions 3x7 ft
Mass:	59 kg
Product Specificity:	 Product Average  Product Specific
Variation in GWP Result (Products):	0% to 0%
Variation in GWP Result (Facilities):	0% to 0%

Product Description

Imagine a door that doesn't just open rooms—it opens doors to a greener future. With every DuraCycle door, we're keeping 140 pounds of plastic out of landfills, using high-quality, recycled materials to make a durable, stylish product. Each door is crafted from thick, recycled panels designed to handle daily wear and tear, high-traffic areas, and still look sleek with a smooth matte finish and clean, squared edges.

DuraCycle doors are built to be as adaptable as they are tough. With a standard thickness of 1 inch, they come with reinforced components and sturdy construction to ensure lasting strength. Each door can be customized for specific needs, including lock placement and lighting options, and it's delivered ready to install with prepped hinges and heavy-duty mounts.

Our focus on sustainability goes beyond materials—it's in the durability. Tested to handle over 4 million open-and-close cycles, the DuraCycle door proves that eco-friendly design can be as strong as it is stylish. Available in our signature peppercorn gray and a range of custom colors, the DuraCycle door is a reliable, sustainable choice that looks great today and supports a better tomorrow.

Product Specifications

Product SKU(s): DC-3X7-CL@39 1/4"-SOLID

Product Classification Codes: Masterformat - Division 8
EC3 - Openings -> DoorsAndFrames -> MetalDoorAndFrames

Material Composition

Material/Component Category	Origin	% Mass
Steel	US	1.4
Plastic	US	92.5
Thermoset	US	5.9
Other	US	0.2

Packaging Material	Origin	kg Mass
Crates	US	89.8

Hazardous Materials
None

EPD Data Specificity

Primary Data Year: 2023

Manufacturing Specificity:

- ☒ Industry Average
- ☒ Manufacturer Average
- ☒ Facility Specific

Averaging:

Averaging was not conducted for this EPD.

This EPD covers the DuraCycle Door, with the option to add window which is called a lite kit in three sizes: 8x32 in, 24x32 in, and 7x62 in. These doors are all 3x7 ft, with high-density polyethylene as the primary raw material. The final products (the door with lite kits in different sizes) have nearly identical weights.

According to information received from DuraCycle, only 2-3% of doors include a lite kit, while the majority are manufactured without one. Therefore, the representative product for this EPD was selected as a 3x7 ft DuraCycle Door without a lite kit. Additionally, the impact of adding a lite kit (in the three listed sizes) is reported using a scaling factor.

System Boundary

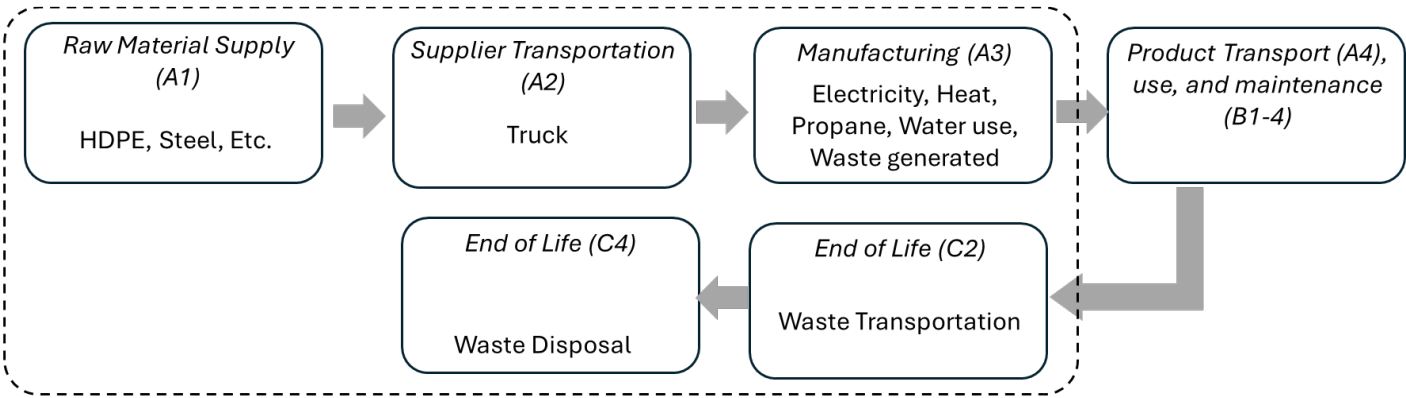
Production	A1	Raw material supply	✓
	A2	Transport	✓
	A3	Manufacturing	✓
Construction	A4	Transport to site	ND
	A5	Assembly / Install	ND
Use	B1	Use	ND
	B2	Maintenance	ND
	B3	Repair	ND
	B4	Replacement	ND
	B5	Refurbishment	ND
	B6	Operational Energy Use	ND
	B7	Operational Water Use	ND
End of Life	C1	Deconstruction	✓
	C2	Transport	✓
	C3	Waste Processing	✓
	C4	Disposal	✓
Benefits & Loads Beyond System Boundary	D	Recycling, Reuse Recovery Potential	ND

Plants



DuraFlex
899 Venture Blvd, Wooster, OH, USA

Product Flow Diagram



System Boundary for this LCA Study

Software and Database

LCA Software:	 SimaPro v. 9.6
LCI Foreground Database(s):	 Ecoinvent v. 3.10  US, Global, Rest of World  Cut-Off  DATASmart LCI Package v. 2021  US  Cut-Off
LCI Background Database(s):	 Ecoinvent v. 3.10  US, Global, Rest of World  Cut-Off  DATASmart LCI Package v. 2021  US  Cut-Off  Industry Data v. 2.0

Data Quality

Life cycle inventory data used in this study are evaluated based on three categories: precision and completeness, consistency and reproducibility, and representativeness.

Precision and completeness: Foreground data are sourced from primary information provided by the client and has been reviewed internally to ensure precision and completeness. In order to balance out seasonal variations, operations data over a 12-month period is used to represent production activities. In addition, key model input such as mass balance, energy balance and emission inventory are reviewed by TrueNorth Collective team.

ecoinvent v3.10, DATASmart and Industry Data 2.0 were used as the main databases for background data. Latest versions of ecoinvent and DATASmart were published in 2024. ecoinvent is widely used in research and industry to support life cycle assessment practices. Each version of this database goes through thorough review process and documentation of precision and completeness is available by the provider. Both ecoinvent and DATASmart use the cut-off approach to allocation of materials for recycling.

Consistency and reproducibility: To ensure consistency, primary data were collected at the same level of granularity. All input and output information, modeling assumptions and dataset choices are provided in this report for the purpose of reproducibility.

Representativeness: Secondary data were assessed and deemed to be adequate for temporal, geographical and technological representativeness.

Life Cycle Module Descriptions

Raw Material Supply (A1)

This module covers raw material extraction and processing. This is inclusive of generation of electricity, heat, and other energy resources used for extraction and processing of raw materials, including their extraction, refining, and transport.

DuraCycle Doors are primarily made from plastic materials. The datasets available in ecoinvent and Industry Data 2.0 were used for the background data. Under the direction of TrueNorth, DuraCycle collected primary manufacturing data and data from key suppliers. Since material and component procurement had the highest contribution in most of environmental impact categories, the suppliers of main raw material were asked to confirm the representative unit processes for these raw materials, e.g., steel, high-density polyethylene (HDPE). The supplier of HDPE provided primary data for heat and electricity consumption in the process of raw material pre-processing. Then, the dataset was customized based on the data provided, to represent the characteristics of actual input raw materials to the greatest extent possible.

Transportation to Manufacturing Site (A2)

Transportation modes and distances representing DuraCycle Door supply chain network were collected. The distance referring to the weighted average amount across all material types transported from suppliers to the DuraCycle manufacturing site in Wooster, OH was calculated.

Manufacturing (A3)

Components are sourced and pre-processed at the local and national supplier locations. Processes such as cutting, are outsourced to local partners. Pre-finished parts are then assembled at DuraCycle's facility in Wooster, OH.

Once the doors are assembled, they are moved to the packing department using forklifts.

DuraCycle Entry/Exit Doors are packaged into crates for transport. The packing team prepares the doors for shipping, and forklifts are used again to take the packed doors to the shipping area. Finally, the packed doors are loaded onto freight trucks for delivery.

The information module "manufacturing" includes:

- Generation of electricity and heat from primary energy resources used in manufacturing, including their extraction, refining and transport. For the generation of electricity used in manufacturing, the medium voltage electricity from e-grid subregion RFC was used.
- Manufacturing of products
- Manufacturing of packaging, including their extraction, manufacturing and transport. Crats are used for product packaging. Background data for raw material extraction, and transportation of packaging material were used from ecoinvent and Industry Data 2.0.
- Waste management from manufacturing packaging and manufacturing wastage including transport up to the recycler or disposal

End of Life (C1-C4)

It is assumed that removal at the end of life requires only human labor and does not contribute to lifetime environmental impacts. Primary data for Deconstruction (C1) and Waste Processing (C3) was not collected and since energy and material use for these stages will be minimal, the associated impacts were assumed to be zero.

Transport to Disposal Facilities (C2)

For transportation at the end of life, a broad assumption of a distance of 100 km was used. Based on the weight of each product, the intensity of transportation was estimated.

Disposal of the Product (C4)

The rates of recycling, landfilling, and incineration for different types of material were used as provided in Table 4 of the PCR. These percentages are then applied in the LCA model by multiplying to component and packaging weights.

LCA Discussion

Allocation Procedure

The Wooster Facility manufactures DuraCycle Entry/Exit Doors and DuraFlex Dock Doors. Since the assembly process for these products is similar, the facility-level inventories are allocated to products based on the production volume.

Aside from this, no multi-output allocation was necessary in the foreground of the study. Allocation of secondary data taken from ecoinvent v3.10 cut-off by classification has allocation applied to it.

This study uses the cut-off approach method for recycling. According to this approach, the first life of a material bears the environmental burdens of its production (e.g., raw material extraction and processing) and the second life (e.g., scrap input) bears the burdens of refurbishment (e.g., collection and refining of scrap). The burdens from waste treatment are taken on by the next life of the product and not included in this study.

Cut-off Procedure

Cut-off by classification.

Renewable Electricity

Energy Attribute Certificates (EACs) such as Renewable Energy Certificates (RECs) or Power Purchase Agreements (PPAs) are included in the baseline reported results:

✗ No

Results

Environmental Impact Assessment Results

IPCC AR5 GWP 100, TRACI 2.1

per 1 piece of product allowing passage, with the dimensions 3×7 ft.

LCIA results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins or risks.

Impact Category	Method	Unit	A1	A2	A3	A1A2A3	C1	C2	C3	C4
GWP-total	IPCC AR5 GWP 100	kg CO2 eq	364	16.2	75.4	455	ND	1.15	ND	2.94
ODP	TRACI 2.1	kg CFC 11 eq	0.00000896	2.48e-7	0.00000153	0.0000107	ND	1.76e-8	ND	2.25e-8
AP	TRACI 2.1	kg SO2 eq	1.23	0.0837	0.0887	1.4	ND	0.00595	ND	0.00969
EP	TRACI 2.1	kg N eq	0.883	0.018	1.64	2.54	ND	0.00128	ND	1.21
POCP	TRACI 2.1	kg O3 eq	14.6	2.36	2.27	19.2	ND	0.168	ND	0.141
GWP-luluc	IPCC AR5 GWP 100	kg CO2 eq	0.266	0.00639	0.0034	0.276	ND	0.000454	ND	0.00082

Note:

Not all abbreviated indicators listed below may be present in the results above. The inclusion of indicators varies based on PCR requirements.

Abbreviations:

GWP = Global Warming Potential, 100 years (may also be denoted as GWP-total, GWP-fossil (fossil fuels), GWP-biogenic (biogenic sources), GWP-luluc (land use and land use change)), ODP = Ozone Depletion Potential, AP = Acidification Potential, EP = Eutrophication Potential, SFP = Smog Formation Potential, POCP = Photochemical oxidant creation potential, ADP-Fossil = Abiotic depletion potential for fossil resources, ADP-Minerals&Metals = Abiotic depletion potential for non-fossil resources, WDP = Water deprivation potential, PM = Particulate Matter Emissions, IRP = Ionizing radiation, human health, ETP-fw = Eco-toxicity (freshwater), HTP-c = Human toxicity (cancer), HTP-nc = Human toxicity (non-cancer), SQP = Soil quality index.

Carbon Emissions from Land-use Change (GWP-lulc): This impact category is still under development and may have high levels of uncertainty that preclude international acceptance pending further development. Use caution when interpreting data in this category.

Comparisons cannot be made between product-specific or industry average EPDs at the design stage of a project, before a building has been specified. Comparisons may be made between product-specific or industry average EPDs at the time of product purchase when product performance and specifications have been established and serve as a functional unit for comparison. Environmental impact results shall be converted to a functional unit basis before any comparison is attempted. Any comparison of EPDs shall be subject to the requirements of ISO 21930 or EN 15804. EPDs are not comparative assertions and are either not comparable or have limited comparability when they have different system boundaries. EPDs are not comparative assertions and are either not comparable or have limited comparability when they have different system boundaries, are based on different product category rules or are missing relevant environmental impacts. Such comparison can be inaccurate, and could lead to erroneous selection of materials or products which are higher-impact, at least in some impact categories.

Resource Use Indicators

per 1 piece of product allowing passage, with the dimensions 3×7 ft.

Indicator	Unit	A1	A2	A3	A1A2A3	C1	C2	C3	C4
PERE	MJ	ND	ND	ND	ND	ND	ND	ND	ND
PERM	MJ	ND	ND	ND	ND	ND	ND	ND	ND
PERT	MJ	ND	ND	ND	ND	ND	ND	ND	ND
PENRE	MJ	ND	ND	ND	ND	ND	ND	ND	ND
PENRM	MJ	ND	ND	ND	ND	ND	ND	ND	ND
PENRT	MJ	ND	ND	ND	ND	ND	ND	ND	ND
RPRE	MJ	237	2.87	0.879	241	ND	0.204	ND	0.563
RPRM	MJ	1340	ND	ND	1340	ND	ND	ND	ND
RPRT	MJ	1580	2.87	0.879	1580	ND	0.204	ND	0.563
NRPRE	MJ	7210	229	1190	8630	ND	16.3	ND	18.7
NRPRM	MJ	ND	ND	ND	ND	ND	ND	ND	ND
NRPRT	MJ	7210	229	1190	8630	ND	16.3	ND	18.7
ADP-fossil	MJ	823	30.3	176	1030	ND	2.15	ND	2.26
SM	kg	0.0539	ND	ND	0.0539	ND	ND	ND	ND
RSF	MJ	ND	ND	ND	ND	ND	ND	ND	ND
NRSF	MJ	ND	ND	ND	ND	ND	ND	ND	ND
FW	m3	2.02	0.0304	-0.297	1.75	ND	0.00216	ND	-0.219

Note:

Not all abbreviated indicators listed below may be present in the results above. The inclusion of indicators varies based on PCR requirements.

Abbreviations:

RPRE or PERE = Renewable primary resources used as energy carrier (fuel), RPRM or PERM = Renewable primary resources with energy content used as material, RPRT or PERT = Total use of renewable primary resources with energy content, NRPRE or PENRE = Non-renewable primary resources used as an energy carrier (fuel), NRPRM or PENRM = Non-renewable primary resources with energy content used as material, NRPRT or PENRT = Total non-renewable primary resources with energy content, SM = Secondary materials, RSF = Renewable secondary fuels, NRSF = Non-renewable secondary fuels, RE = Recovered energy, ADPF = Abiotic depletion potential, FW = Use of net freshwater resources, VOCs = Volatile Organic Compounds.

Waste and Output Flow Indicators

per 1 piece of product allowing passage, with the dimensions 3×7 ft.

Indicator	Unit	A1	A2	A3	A1A2A3	C1	C2	C3	C4
HWD	kg	ND	ND	ND	ND	ND	ND	ND	ND
NHWD	kg	ND	ND	79	79	ND	ND	ND	58.1
RWD	kg	ND	ND	ND	ND	ND	ND	ND	ND
HLRW	kg	ND	ND	ND	ND	ND	ND	ND	ND
ILLRW	kg	ND	ND	ND	ND	ND	ND	ND	ND
CRU	kg	ND	ND	ND	ND	ND	ND	ND	ND
MFR	kg	ND	ND	42.9	42.9	ND	ND	ND	0.801
MER	kg	ND	ND	1.14	1.14	ND	ND	ND	0.839
MNER	kg	ND	ND	ND	ND	ND	ND	ND	ND
EEE	MJ	ND	ND	ND	ND	ND	ND	ND	ND
EET	MJ	ND	ND	ND	ND	ND	ND	ND	ND

Note:

Not all abbreviated indicators listed below may be present in the results above. The inclusion of indicators varies based on PCR requirements.

Abbreviations:

HWD = Hazardous waste disposed, NHWD = Non-hazardous waste disposed, RWD = Radioactive waste disposed, HLRW = High-level radioactive waste, ILLRW = Intermediate- and low-level radioactive waste, CRU = Components for re-use, MFR or MR = Materials for recycling, MER = Materials for energy recovery, MNER = Materials for incineration, no energy recovery, EE or EEE = Recovered energy exported from the product system, EET = Exported thermal energy.

Carbon Emissions and Removals

per 1 piece of product allowing passage, with the dimensions 3x7 ft.

Indicator	Unit	A1	A2	A3	A1A2A3
BCRP	kg CO2	0.249	ND	ND	0.249
BCEP	kg CO2	ND	ND	ND	ND
BCRK	kg CO2	ND	ND	165	165
BCEK	kg CO2	ND	ND	ND	ND
BCEW	kg CO2	ND	ND	ND	ND
CCE	kg CO2	ND	ND	ND	ND
CCR	kg CO2	ND	ND	ND	ND
CWNR	kg CO2	ND	ND	ND	ND

Note:

Not all abbreviated indicators listed below may be present in the results above. The inclusion of indicators varies based on PCR requirements.

Abbreviations:

BCRP = Biogenic Carbon Removal from Product, BCEP = Biogenic Carbon Emission from Product, BCRK = Biogenic Carbon Removal from Packaging, BCEK = Biogenic Carbon Emission from Packaging, BCEW = Biogenic Carbon Emission from Combustion of Waste from Renewable Sources Used in Production Processes, CCE = Calcination Carbon Emissions, CCR = Carbonation Carbon Removals, CWNR = Carbon Emissions from Combustion of Waste from Non-Renewable Sources used in Production Processes, GWP-luc = Carbon Emissions from Land-use Change.

Impact Scaling Factors

Product	Scaling Factor
DuraCycle Door	1.000
DuraCycle Door with Lite Kit 8*32in	1.083
DuraCycle Door with Lite Kit 24*32in	1.180
DuraCycle Door with Lite Kit 7*62in	1.140

The results in this EPD for this grouping are reported for one piece allowing passage (the declared unit) measuring 3x7 ft of a DuraCycle Door. Environmental impacts of other types of doors in this category, i.e., DuraCycle Door with a Lite Kit (available in three sizes: 8x32 in, 24x32 in, and 7x62 in) (product-specific results), can be calculated using the following equation:

$$\text{Results_PS} = \text{Results_Ref} \times \text{Multiplier_PS}$$

Where:

Results_PS: The product-specific result per declared unit

Results_Ref: The result per declared unit of the reference product

Multiplier_PS: The product-specific declared unit multiplier

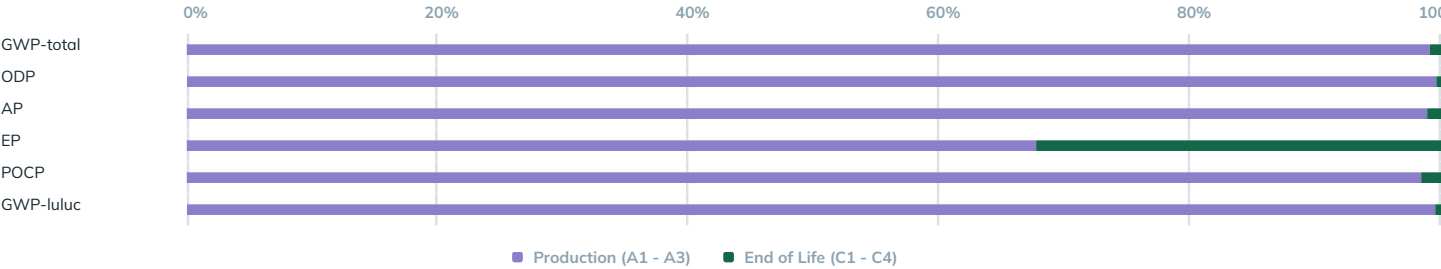
The impact scaling factor table provides the product-specific declared unit multipliers (Multiplier_PS, marked as "Scaling Factor" in the table), calculated as (specific product's mass per declared unit)/(reference product's mass per declared unit).

This calculation method can be applied to derive results for any or all declared indicators and for any reported life cycle module(s). When using this equation, the EPD user defines which indicator(s) and life cycle stage(s) they are considering to calculate a product-specific result. The Results_PS and Results_Ref values must correspond to the same indicator(s) and life cycle stage(s).

Interpretation

Interpretation is the last phase of an LCA, although it is typically done iteratively to inform and refine the goal and scope. In this section, the results are examined based on the data quality and consistency. Key assumptions are reviewed to ensure that conclusions and recommendations are consistent with the goal and scope. It should be noted that LCA results are based on a relative approach and indicate potential environmental effects therefore do not predict actual impacts on category end points.

Based on the results and study assumptions, methods and data, the cradle-to-gate impacts for, the contribution analysis indicates that the majority of the potential impacts occur as a result of raw material supply (A1), specifically high density polyethylene.



Additional Environmental Information

DuraCycle Door does not contain any substances identified as hazardous according to the normative requirements in standards or regulations applicable in the markets where they are sold, and the additional standards listed in PCR Part A 8.4.1.

DuraCycle Door does not release any dangerous substances as classified by the standards listed in PCR Part A 8.4.1.

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