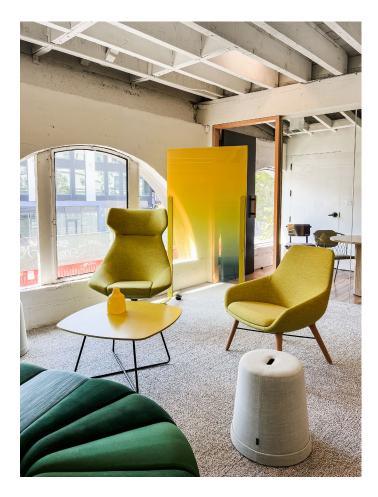


With nearly 80 years of crafting the world's finest writing surfaces Claridge and Calyx by Claridge offer a comprehensive product portfolio ideal for environments ranging from K-12 schools to sleek corporate spaces. Our products facilitate learning, foster collaboration, stimulate creativity, and empower people to reach their full potential.

Always an industry leader, we introduced and produced the first markerboards, called the LCS or Liquid Chalk System, to the United States at the AASA show in New Jersey in 1973. The markerboard quickly replaced the chalkboard and the resulting demand led to another expansion of the Claridge facility. Throughout the years Claridge has continued its leadership position in new product development offering all types of chalkboards and markerboards, including glass which was introduced in 2008, and expanding its core to include mobiles, horizontal and vertical sliding units, enclosed bulletin board cabinets, trophy cases, and so much more. More than 250 employees make up the Claridge team, including several with more than 45 years of service.

In 2022, Claridge Products introduced a new brand, Calyx by Claridge, to work alongside its thriving construction products division. Calyx by Claridge focuses on design-centric commercial interiors and furniture while Claridge concentrates on work completed through general contractors and architects on public bid contracts, largescale renovations and remodels and new construction projects in the commercial, K-12, higher education and hospitality sectors.



Mobile Glass Whiteboards enhance the look of any space and are perfect for environments that require flexibility with the location of their writing surfaces.

The Mina Glass Mobile, one of the products within the Mobile Glass Whiteboards product category, is displayed above. Declaration Owner Claridge Products 480 Wrangler Drive, Suite 200 Coppell, TX 75019 https://claridgeproducts.com/ https://calyxbyclaridge.com/ 1-800-364-2422



Product

Mobile Glass Whiteboards

Functional Unit

The functional unit is one square meter (1 m²) of workspace, for a 10year period.

EPD Number and Period of Validity

SCS-EPD-10370 Valid: April 25, 2025 through April 24, 2030

Product Category Rule

BIFMA PCR for Office Furniture Workspace Products: UNCPC 3814, V2. NSF International. Valid through January 2030.

Program Operator

SCS Global Services 2000 Powell Street, Ste. 600, Emeryville, CA 94608 +1.510.452.8000 | www.SCSglobalServices.com



| Declaration owner: | Claridge Products | | | |
|---|--|--|--|--|
| Address: | 480 Wrangler Drive, Suite 200, Coppell, TX 75019 | | | |
| For Additional Explanatory Material: | calyx@claridgeproducts.com | | | |
| Declaration Number: | SCS-EPD-10370 | | | |
| Date of Issue: | April 25, 2025 | | | |
| Declaration Validity Period: | April 25, 2025 through April 24, 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 | | | |
| Product(s): | Mobile Glass Whiteboards | | | |
| Functional Unit: | 1 m ² of workspace, for a 10-year period | | | |
| EPD Type and Scope: | Product Specific, Cradle-to-gate with options | | | |
| Product RSL: | 10 Years | | | |
| Product Subcategory: | Option B: Panels in addition with other office components intended for one person | | | |
| Markets of Applicability: | North America | | | |
| | | | | |
| Year(s) of Reported Manufacturer Primary Data: | July 2023 - June 2024 | | | |
| LCA Software & Version Number: | SimaPro v9.6 | | | |
| LCI Database(s) & Version Number: | Ecoinvent 3.10 or USLCI 2015 | | | |
| LCIA Methodology & Version Number: | TRACI 2.1; CML 4.1 | | | |
| Reference PCR: | BIFMA PCR for Office Furniture Workspace Products: UNCPC 3814, V2. NSF | | | |
| | International. Valid through January 2030. | | | |
| Sub-category PCR review: | Thomas P. Gloria, PhD, Industrial Ecology Consultants; Jack Geibig, PE, Ecoform; | | | |
| | Michael Overcash, PhD, Environmental Clarity | | | |
| Independent critical review of the LCA and | 🗆 internal 🛛 🖾 external | | | |
| data, according to ISO 14044 and the PCR: | | | | |
| | $\Theta \sim 10^{10}$ | | | |
| LCA Reviewer: | Doth assesse | | | |
| | | | | |
| | Beth Cassese, SCS Global Services | | | |
| Independent verification of the declaration | | | | |
| and data, according to ISO 14025 and the PCR: | 🗆 internal 🛛 🖾 external | | | |
| | | | | |
| | | | | |
| EPD Verifier: | (Dorth asses | | | |
| Li D vermer. | | | | |
| | Beth Cassese, SCS Global Services | | | |
| | 1. Claridge Products | | | |
| | 2. Products | | | |
| | Methodological Framework Technical Information and Scenarios | | | |
| Declaration Contents: | 5. LCA: Results | | | |
| | 6. LCA: Interpretation | | | |
| | 7. Additional Environmental Information | | | |
| | 8. References | | | |
| Disclaimers: This EPD conforms to ISO 14025, 140 | 40, 14044, and ISO 21930. | | | |
| | limit the scope of the LCA metrics such that the results exclude environmental and social | | | |
| performance benchmarks and thresholds, and excl | de impacts from the depletion of natural resources, land use ecological impacts, ocean | | | |
| impacts related to greenhouse gas emissions, risks j | from hazardous wastes and impacts linked to hazardous chemical emissions. | | | |
| Accuracy of Results: Due to PCR constraints, this E | PD provides estimations of potential impacts that are inherently limited in terms of | | | |
| accuracy. | | | | |
| Comparability: The PCR this EPD was based on wa | s not written to support comparative assertions. EPDs based on different PCRs, or | | | |
| | le. When attempting to compare EPDs or life cycle impacts of products from different | | | |
| | inty 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 specifi | | | | |
| | nparable only if they comply with the core PCR, use the same sub-category PCR where | | | |
| | s and are based on equivalent scenarios with respect to the context of construction works. | | | |
| ασοπασμε, παισσε απτειενατή πποτπατιοπ ποσΠιε | | | | |
| | | | | |
| The owner of the declaration shall be liable for | the underlying information and evidence; SCS shall not be liable with respect to | | | |
| The owner of the declaration shall be liable for | | | | |
| The owner of the declaration shall be liable for | the underlying information and evidence; SCS shall not be liable with respect to | | | |

1. Claridge Products

Backed by the manufacturing expertise and distribution network of its parent company, Claridge Products and Equipment is the leading manufacturer of writing surfaces in the U.S. market. With two comprehensive brand channels, the company has the most comprehensive product offering with the two best writing surfaces in the industry: glass and porcelain. We are experts at engineering and manufacturing products that provide superior ease of installation.

2. Products

2.1 PRODUCT DESCRIPTION

Mobile Glass Whiteboards enhance the look of any space and are perfect for environments that require flexibility with the location of their writing surfaces

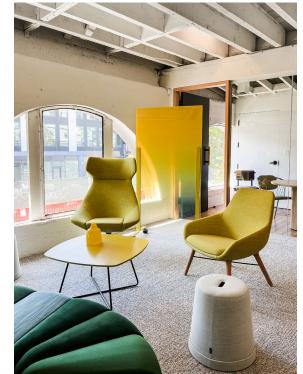
- Available in glass and multiple tackboard options
- Nesting capabilities for ease of storage
- Doubles as a flexible option for space creation

The Mina Glass Mobile, one of the products within the Mobile Glass Whiteboards product category, is displayed to the right.

This EPD evaluates the following products as part of this Mobile Glass Whiteboards product category:

Mina Glass Mobile, Mix Contemporary Glass Mobile, Mix Industrial Glass Mobile, Switch Glass MB Mobile, Venue Glass MB Mobile, X2 Glass MB Mobile

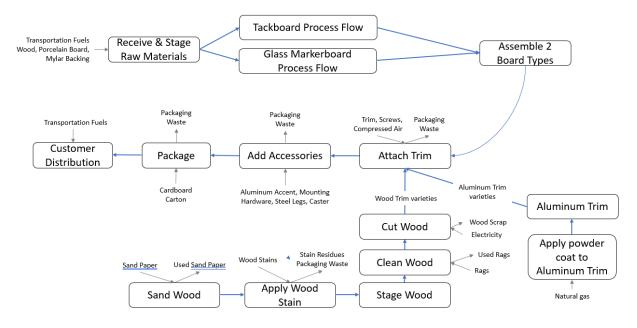
In accordance with the PCR, this EPD presents the results of a base configuration product, as well as alternative configurations to reflect the minimum and maximum environmental impacts of this product category. The base configuration product was selected as a product having median impact results within the entire product category portfolio of this EPD. The base configuration product presented is the Mix Contemporary Glass Mobile, the minimum alternative configuration is the Mina Glass Mobile, and the maximum alternative configuration is the X2 Glass MB Mobile.



2.2 PRODUCT SPECIFICATION

Mobile Glass Whiteboards are SCS Indoor Advantage Gold Certified (excluding wood trim units). These products are available in sizes from 3'x4' to 6'x5'.

2.3 FLOW DIAGRAM



2.4 PRODUCT REPRESENTATIONS

For this product category EPD, median, minimum, and maximum impact products were chosen to represent the product family, in accordance with the PCR. The results in this EPD present a base configuration as well as alternative configurations to reflect maximum and minimum impacts to environmental categories.

2.5 APPLICATION

Mobile Glass Whiteboards are ideal for a wide range of applications and environments including but not limited to corporate interiors, education, healthcare, and anywhere collaboration happens.

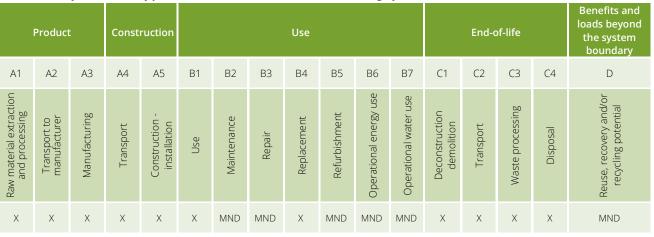
3. Methodological Framework

3.1 FUNCTIONAL UNIT

1 m² of workspace, for a 10-year period.

3.2 SYSTEM BOUNDARY

The life cycle phases included in the scope of this EPD are presented in Table 1. System Boundary for the Mobile Glass Whiteboards Product Category.





X = Module Included | MND = Module Not Declared

3.3 END-OF-LIFE

In accordance with the PCR, the end-of-life scenario was modeled based on the 2018 US EPA, therefore the study assumes 25.0% of glass materials, 33.1% of steel materials and 17.2% of aluminum materials are recycled at the end of life. For the remaining unrecycled materials, it is assumed that 20% goes to incineration and 80% goes to landfill.

3.4 ALLOCATION

General principles of allocation were based on ISO 14040/44. ecoinvent databases tend to allocate based on either economic or physical (mass and area) basis. Additionally, primary electricity and natural gas from the Harrison extruded aluminum facility was allocated exclusively to products containing Extruded Aluminum with a mass and area allocation approach, in order to reflect the process flow of the facility.

3.5 CUT-OFF RULES

Processes whose total contribution to the final result, with respect to their mass and in relation to all considered impact categories, is less than 1% can be neglected. The sum of the neglected processes may not exceed 5% by mass and by 5% of the considered impact categories.

3.6 DATA SOURCES

Primary data are the information collected directly from Claridge and includes the average values, locations, formulations, chemical compositions, etc. of the products in scope. Primary data from the manufacturer was from July 2023 to June 2024. These primary data are based on direct information sources of the manufacturer.

All secondary data were taken from literature, previous LCI studies, and life cycle databases. Each dataset used was taken from ecoinvent or USLCI (United States Life Cycle Inventory) databases. These databases are widely distributed and referenced within the LCA community and are either partially or fully critically reviewed.

Inputs and outputs related to combustible material were transformed using the heat of combustion values based on higher heating values (HHVs), in accordance with Section 4.3.3.1 of ISO 14044:2006

Table 2 below presents the data sources for the Mobile Glass Whiteboards product category.

Claridge Products | Mobile Glass Whiteboards

| Flow | Dataset | Data Source | Publication Date |
|-----------------------|---|-------------|------------------|
| Raw Materials | | | |
| ABS | Acrylonitrile-butadiene-styrene copolymer {RoW} acrylonitrile-butadiene- styrene copolymer production Cut-off, U | ecoinvent 3 | 2023 |
| | Injection moulding {RoW} injection moulding Cut-off, U | ecoinvent 3 | 2023 |
| Aluminum | Aluminium, cast alloy {GLO} market for aluminium, cast alloy Cut-off, U | ecoinvent 3 | 2023 |
| Aluminum Hardware | Aluminium, cast alloy {GLO} market for aluminium, cast alloy Cut-off, U | ecoinvent 3 | 2023 |
| Ash Wood | Sawnwood, hardwood, raw, dried (u=10%) {RoW} sawnwood production, hardwood, raw, dried (u=10%) Cut-off, U | ecoinvent 3 | 2023 |
| | Aluminium alloy, AlLi {GLO} market for aluminium alloy, AlLi Cut-off, U | ecoinvent 3 | 2023 |
| Extruded Aluminum | Electricity, at eGrid, SRMV, 2022/RNA U | USLCI | 2022 |
| | Heat, district or industrial, natural gas {RoW} market for heat, district or industrial, natural gas Cut-off, U | ecoinvent 3 | 2023 |
| FAS Ash Wood | Sawnwood, hardwood, raw, dried (u=10%) {RoW} sawnwood production, hardwood, raw, dried (u=10%) Cut-off, U | ecoinvent 3 | 2023 |
| Forza Adhesive | Paraffin {GLO} market for paraffin Cut-off, U | ecoinvent 3 | 2023 |
| Galvanized Steel | Galvanized steel sheet, at plant/RNA | USLCI | 2015-2022 |
| Glass | Flat glass, uncoated {RoW} market for flat glass, uncoated Cut-off, U | ecoinvent 3 | 2023 |
| Honeycomb (Cardboard) | Corrugated board box {RoW} market for corrugated board box Cut-off, U | ecoinvent 3 | 2023 |
| | Butyl acetate {RoW} butyl acetate production Cut-off, U | ecoinvent 3 | 2023 |
| | Ammonium nitrate {RoW} market for ammonium nitrate Cut-off, U | ecoinvent 3 | 2023 |
| | 1-propanol {RoW} 1-propanol production Cut-off, U | ecoinvent 3 | 2023 |
| Lacquer | Ethanol, without water, in 99.7% solution state, from ethylene {RoW} market for ethanol, without water, in 99.7% solution state, from ethylene Cut-off, U | ecoinvent 3 | 2023 |
| | Acetone, liquid {RoW} market for acetone, liquid Cut-off, U | ecoinvent 3 | 2023 |
| | Methyl acetate {RoW} acetic acid production, butane oxidation Cut-off, U | ecoinvent 3 | 2023 |
| | Urea formaldehyde resin {RoW} urea formaldehyde resin production Cut- off, U | ecoinvent 3 | 2023 |
| | Polyester resin, unsaturated {RoW} market for polyester resin, unsaturated Cut-off, U | ecoinvent 3 | 2023 |
| | Triazine-compound {GLO} market for triazine-compound Cut-off, U | ecoinvent 3 | 2023 |
| | Methacrylic acid {RoW} methacrylic acid production Cut-off, U | ecoinvent 3 | 2023 |
| | Silica sand {GLO} market for silica sand Cut-off, U | ecoinvent 3 | 2023 |
| | Benzoic acid {RoW} market for benzoic acid Cut-off, U | ecoinvent 3 | 2023 |
| | Petroleum slack wax {GLO} market for petroleum slack wax Cut-off, U | ecoinvent 3 | 2023 |
| | Tris(2,4-ditert-butylphenyl) phosphite {GLO} market for tris(2,4-ditert- butylphenyl) phosphite Cut-off, U | ecoinvent 3 | 2023 |
| | Aniline {RoW} market for aniline Cut-off, U | ecoinvent 3 | 2023 |
| | Carbon disulfide {GLO} market for carbon disulfide Cut-off, U | ecoinvent 3 | 2023 |
| Metallic Paint | Sulfur {GLO} market for sulfur Cut-off, U | ecoinvent 3 | 2023 |
| | Aluminium hydroxide {GLO} market for aluminium hydroxide Cut-off, U | ecoinvent 3 | 2023 |
| | Limestone, unprocessed {RoW} market for limestone, unprocessed Cut-off, U | ecoinvent 3 | 2023 |
| | Silica sand {RoW} silica sand production Cut-off, U | ecoinvent 3 | 2023 |
| | Water, completely softened {RoW} market for water, completely softened Cut-off, U | ecoinvent 3 | 2023 |
| | Titanium dioxide {RoW} market for titanium dioxide Cut-off, U | ecoinvent 3 | 2023 |
| | Aluminium, cast alloy {GLO} market for aluminium, cast alloy Cut-off, U | ecoinvent 3 | 2023 |
| | Potash salt {RoW} market for potash salt Cut-off, U | ecoinvent 3 | 2023 |
| | Magnetite {GLO} market for magnetite Cut-off, U | ecoinvent 3 | 2023 |
| Powder Coating | Powder coat, aluminium sheet {GLO} market for powder coat, aluminium sheet Cut-off, U | ecoinvent 3 | 2023 |
| Steel | Steel, low-alloyed {GLO} market for steel, low-alloyed Cut-off, U | ecoinvent 3 | 2023 |
| Stainless Steel | Steel, stainless 304, flat rolled coil/kg/RNA | USLCI | 2022 |
| White Glue | Polyurethane adhesive {GLO} market for polyurethane adhesive Cut-off, U | ecoinvent 3 | 2023 |

Table 2. Data Sources for the Mobile Glass Whiteboards Product Category

Environmental Product Declaratio

Claridge Products | Mobile Glass Whiteboards

| Flow | Dataset | Data Source | Publication Date |
|------------------------------|---|-------------|------------------|
| Double Sided Tape | Polypropylene, granulate {GLO} market for polypropylene, granulate Cut- off, U | ecoinvent 3 | 2023 |
| | Zinc {RoW} primary zinc production from concentrate Cut-off, U | ecoinvent 3 | 2023 |
| | Nylon 6 {RoW} market for nylon 6 Cut-off, U | ecoinvent 3 | 2023 |
| Caster | Injection moulding {RoW} injection moulding Cut-off, U | ecoinvent 3 | 2023 |
| | Metal working, average for steel product manufacturing {RoW} metal working, average for steel product manufacturing Cut-off, U | ecoinvent 3 | 2023 |
| Fiberglass | Glass fibre {GLO} market for glass fibre Cut-off, U | ecoinvent 3 | 2023 |
| Pine Wood | Sawnwood, hardwood, raw, dried (u=10%) {RoW} sawnwood production, hardwood, raw, dried (u=10%) Cut-off, U | ecoinvent 3 | 2023 |
| Production | | | |
| Electricity | Electricity, at eGrid, SRMV, 2022/RNA U | USLCI | 2022 |
| Natural Gas | Heat, district or industrial, natural gas {RoW} market for heat, district or industrial, natural gas Cut-off, U | ecoinvent 3 | 2023 |
| Incoming Water | Water, completely softened {US} market for water, completely softened Cut-off, U | ecoinvent 3 | 2023 |
| Transportation | | | |
| Truck Transportation | Transport, combination truck, average fuel mix/US | USLCI | 2015-2022 |
| Ship Transportation | Transport, ocean freighter, average fuel mix/US | USLCI | 2015-2022 |
| Packaging Materials | | | |
| | Corrugated board box {US} market for corrugated board box Cut-off, U | ecoinvent 3 | 2023 |
| Cardboard (75% Recycled) | Graphic paper, 100% recycled {GLO} market for graphic paper, 100% recycled Cut-off, U | ecoinvent 3 | 2023 |
| Paper | Kraft paper {RoW} market for kraft paper Cut-off, U | ecoinvent 3 | 2023 |
| | Polyethylene terephthalate, granulate, amorphous, recycled {US} market for polyethylene terephthalate, granulate, amorphous, recycled Cut-off, U | ecoinvent 3 | 2023 |
| Polyester (50% Recycled) | Polyethylene terephthalate, granulate, amorphous {GLO} market for polyethylene terephthalate, granulate, amorphous Cut-off, U | ecoinvent 3 | 2023 |
| | Polystyrene, general purpose {RoW} polystyrene production, general purpose Cut-off, U | ecoinvent 3 | 2023 |
| Polystyrene (50% Recycled) | Polystyrene scrap, post-consumer {GLO} polystyrene scrap, post-consumer, Recycled Content cut-off Cut-off, U | ecoinvent 3 | 2023 |
| Polyphenylene Ether (50% | Packaging film, low density polyethylene {RoW} packaging film production, low density polyethylene Cut-off, U | ecoinvent 3 | 2023 |
| Recycled) | Polyethylene, high density, granulate, recycled {US} polyethylene production, high density, granulate, recycled Cut-off, U | ecoinvent 3 | 2023 |
| Steel | Steel, low-alloyed {GLO} market for steel, low-alloyed Cut-off, U | ecoinvent 3 | 2023 |
| Wood | Sawnwood, softwood, dried (u=10%), planed {RoW} sawnwood production, softwood, dried (u=10%), planed Cut-off, U | ecoinvent 3 | 2023 |
| Support Materials | | | |
| | Dimethyl ether {RoW} market for dimethyl ether Cut-off, U | ecoinvent 3 | 2023 |
| | Isobutane {GLO} market for isobutane Cut-off, U | ecoinvent 3 | 2023 |
| | Acetone, liquid {RoW} market for acetone, liquid Cut-off, U | ecoinvent 3 | 2023 |
| | Pentane {GLO} market for pentane Cut-off, U | ecoinvent 3 | 2023 |
| Super Form Adhesive | Tap water {RoW} market for tap water Cut-off, U | ecoinvent 3 | 2023 |
| Super Foam Adhesive Spray | Polyurethane, flexible foam {RoW} market for polyurethane, flexible foam Cut-off, U | ecoinvent 3 | 2023 |
| | Methyl acetate {GLO} market for methyl acetate Cut-off, U | ecoinvent 3 | 2023 |
| | Cyclohexane {GLO} market for cyclohexane Cut-off, U | ecoinvent 3 | 2023 |
| | Naphtha {RoW} market for naphtha Cut-off, U | ecoinvent 3 | 2023 |
| | Toluene, liquid {RoW} market for toluene, liquid Cut-off, U | ecoinvent 3 | 2023 |
| Support Material Aluminum | Aluminium, cast alloy {GLO} market for aluminium, cast alloy Cut-off, U | ecoinvent 3 | 2023 |
| | Tap water {RoW} market for tap water Cut-off, U | ecoinvent 3 | 2023 |
| Buffer Solution pH 4.0 | Formaldehyde {RoW} market for formaldehyde Cut-off, U | ecoinvent 3 | 2023 |
| 1 | Methanol {US} market for methanol Cut-off, U | ecoinvent 3 | 2023 |

Claridge Products | Mobile Glass Whiteboards

| Tap water {RoW} market for tap water Cut-off, U | ecoinvent 3 | |
|--|---|--|
| | econvent 5 | 2023 |
| Phosphoric acid, industrial grade, without water, in 85% solution state {GLO} market for phosphoric acid, industrial grade, without water, in 85% solution state Cut-off, U | ecoinvent 3 | 2023 |
| Nitric acid, without water, in 50% solution state {RoW} market for nitric acid, without water, in 50% solution state Cut-off, U | ecoinvent 3 | 2023 |
| Lubricating oil {RoW} market for lubricating oil Cut-off, U | ecoinvent 3 | 2023 |
| Tap water {RoW} market for tap water Cut-off, U | ecoinvent 3 | 2023 |
| Sodium hydroxide, without water, in 50% solution state {RoW} market for sodium hydroxide, without water, in 50% solution state Cut-off, U | ecoinvent 3 | 2023 |
| Sodium chloride, powder {GLO} market for sodium chloride, powder Cut- off, U | ecoinvent 3 | 2023 |
| Lubricating oil {RoW} market for lubricating oil Cut-off, U | ecoinvent 3 | 2023 |
| Xylene, mixed {RoW} market for xylene, mixed Cut-off, U | ecoinvent 3 | 2023 |
| 1-butanol {GLO} market for 1-butanol Cut-off, U | ecoinvent 3 | 2023 |
| Phenol {RoW} market for phenol Cut-off, U | ecoinvent 3 | 2023 |
| Dimethylamine {RoW} market for dimethylamine Cut-off, U | ecoinvent 3 | 2023 |
| Formaldehyde {RoW} market for formaldehyde Cut-off, U | ecoinvent 3 | 2023 |
| Ethyl benzene {RoW} market for ethyl benzene Cut-off, U | ecoinvent 3 | 2023 |
| Ethylene diamine {RoW} market for ethylene diamine Cut-off, U | ecoinvent 3 | 2023 |
| Epoxy resin, liquid {RoW} market for epoxy resin, liquid Cut-off, U | ecoinvent 3 | 2023 |
| Bitumen adhesive compound, cold {GLO} market for bitumen adhesive compound, cold Cut-off, U | ecoinvent 3 | 2023 |
| Lubricating oil {RoW} market for lubricating oil Cut-off, U | ecoinvent 3 | 2023 |
| Cumene {GLO} market for cumene Cut-off, U | ecoinvent 3 | 2023 |
| Oxygen, liquid {RoW} market for oxygen, liquid Cut-off, U | ecoinvent 3 | 2023 |
| Methyl methacrylate {RoW} market for methyl methacrylate Cut-off, U | ecoinvent 3 | 2023 |
| Sugar, from sugarcane {RoW} sugarcane processing, traditional annexed plant Cut-off, U | ecoinvent 3 | 2023 |
| Bitumen seal {GLO} market for bitumen seal Cut-off, U | ecoinvent 3 | 2023 |
| Lubricating oil {RoW} market for lubricating oil Cut-off, U | ecoinvent 3 | 2023 |
| Ammonium chloride {GLO} market for ammonium chloride Cut-off, U | ecoinvent 3 | 2023 |
| Tap water {RoW} market for tap water Cut-off, U | ecoinvent 3 | 2023 |
| Lubricating oil {RoW} market for lubricating oil Cut-off, U | ecoinvent 3 | 2023 |
| Xylene, mixed {RoW} market for xylene, mixed Cut-off, U | ecoinvent 3 | 2023 |
| Methyl ethyl ketone {RoW} market for methyl ethyl ketone Cut-off, U | ecoinvent 3 | 2023 |
| Butyl acetate {RoW} market for butyl acetate Cut-off, U | ecoinvent 3 | 2023 |
| Cellulose fibre {RoW} market for cellulose fibre Cut-off, U | ecoinvent 3 | 2023 |
| 2-methyl-1-butanol {GLO} market for 2-methyl-1-butanol Cut-off, U Ethanol, without water, in 99.7% solution state, from ethylene {RoW} market | ecoinvent 3 | 2023 2023 |
| | | |
| | ecoinvent 3 | 2023 |
| off, U | ecoinvent 3 | 2023 |
| Lubricating oil {RoW} market for lubricating oil Cut-off, U | ecoinvent 3 | 2023 |
| Formaldehyde {RoW} market for formaldehyde Cut-off, U | ecoinvent 3 | 2023 |
| 1-propanol {GLO} market for 1-propanol Cut-off, U | ecoinvent 3 | 2023 |
| Methyl ethyl ketone {RoW} market for methyl ethyl ketone Cut-off, U Phosphoric acid, industrial grade, without water, in 85% solution state {GLO} market for phosphoric acid, industrial grade, without water, in 85% solution | ecoinvent 3 ecoinvent 3 | 2023 |
| | Nitric acid, without water, in 50% solution state [RoW] market for nitric acid, without water, in 50% solution state [Cut-off, U Tap water (RoW] market for lubricating oil Cut-off, U Sodium hydroxide, without water, in 50% solution state [RoW] market for sodium chloride, powder (GLO) market for sodium chloride, powder Cut- off, U Lubricating oil (RoW) market for lubricating oil Cut-off, U Lubricating oil (GW) market for lubricating oil Cut-off, U Lubricating oil (RoW) market for solution state Cut-off, U Phenol (RoW) market for 1-butanol Cut-off, U Phenol (RoW) market for formaldehyde Cut-off, U Formaldehyde (RoW) market for formaldehyde Cut-off, U Ethyl benzene (RoW) market for formaldehyde Cut-off, U Ethylene diamine (RoW) market for ethyl benzene Cut-off, U Ethylene diamine (RoW) market for formaldehyde Cut-off, U Ethylene diamine (RoW) market for ethylene acime Cut-off, U Ethylene diamine (RoW) market for ethylene for bitmen adhesive compound, cold Cut-off, U Uubricating oil (RoW) market for lubricating oil Cut-off, U Cumene (GLO) market for lubricating oil Cut-off, U Cumene (GLO) market for lubricating oil Cut-off, U Sugar, from sugarcane {RoW} sugarcane processing, traditional annexed plant Cut-off, U Bitumen seal (GLO) market for lubricating oil Cut-off, U Ammonium chloride (GLO) market for lubricating oil Cut-off, U Ammonium chloride (GLO) market for methyl ethyl ketone Cut-off, U Ammonium chloride (GLO) market for methyl ethyl ketone Cut-off, U Suylane, mixed {RoW} market for rubrylane, fice, U Autoriating oil (RoW) market for rubryle ethyl ketone Cut-off, U Autoriating oil (RoW) market for suplene, mixed Cut-off, U Autoriating oil (RoW) market for suplene, mixed Cut-off, U Autoriating oil (RoW) market for suplene, mixed Cut-off, U Autoriating oil (RoW) market for approxem Cut-off, U Autoriating oil (RoW) market for approxem Cut-off, U Autoriating oil (RoW) market for approxem Cut-off, U Autoriating oil (RoW) market | Nitric acid, without water, in 50% solution state (RoW) market for intric acid, without water, in 50% solution state (Lut-off, U ecoinvent 3 Tap water (RoW) market for tap water Cut-off, U ecoinvent 3 Sodium hydroxide, without water, in 50% solution state (RoW) market for sodium hydroxide, without water, in 50% solution state (Lot-off, U ecoinvent 3 Sodium hydroxide, without water, in 50% solution state (Cut-off, U ecoinvent 3 Sodium chloride, powder (GLO) market for sodium chloride, powder Cut-off, U ecoinvent 3 Lubricating oil (RoW)] market for lubricating oil Cut-off, U ecoinvent 3 Lubricating oil (RoW) market for for 1-butanol Cut-off, U ecoinvent 3 Dimethylamine (RoW) market for dimethylamine Cut-off, U ecoinvent 3 Ethyle no dimine (RoW) market for ethyle ediamine Cut-off, U ecoinvent 3 Ethyle no dimine (RoW) market for ethyle no diamine Cut-off, U ecoinvent 3 Ethylen diamine (RoW) market for lubricating oil Cut-off, U ecoinvent 3 Ethylen diamine (RoW) market for cuthor (LUC)f, U ecoinvent 3 Dimethylamine (RoW) market for cuthoff, U ecoinvent 3 Curmen (GLO) market for cuthoff, U ecoinvent 3 Dimethylamine (RoW) market for cuthoff, U ecoinvent 3 Curmen (GLO) market for cuthoff |

Claridge Products | Mobile Glass Whiteboards

| Flow | Dataset | Data Source | Publication Date |
|---------------------------------------|--|-------------|------------------|
| WD-40 Aerosol | Lubricating oil {RoW} market for lubricating oil Cut-off, U | ecoinvent 3 | 2023 |
| WD-40 AEI 0501 | Carbon dioxide, liquid {RoW} market for carbon dioxide, liquid Cut-off, U | ecoinvent 3 | 2023 |
| Outflows | | | |
| Wastewater | Wastewater, average {RoW} market for wastewater, average Cut-off, U | ecoinvent 3 | 2023 |
| Municipal Solid Waste | Municipal solid waste {RoW} treatment of municipal solid waste, sanitary landfill Cut-off, U | ecoinvent 3 | 2023 |
| End-of-Life | | | |
| Aluminum Incineration | Scrap aluminium {RoW} treatment of scrap aluminium, municipal incineration Cut-off, U | ecoinvent 3 | 2023 |
| Glass Incineration | Waste glass {GLO} treatment of waste glass, municipal incineration Cut-off, U | ecoinvent 3 | 2023 |
| Steel Incineration | Scrap steel {RoW} treatment of scrap steel, municipal incineration Cut-off, U | ecoinvent 3 | 2023 |
| Municipal Solid Waste Incineration | Municipal solid waste {RoW} treatment of municipal solid waste, municipal incineration Cut-off, U | ecoinvent 3 | 2023 |
| Aluminum Landfill | Waste aluminium {RoW} treatment of waste aluminium, sanitary landfill Cut-off, U | ecoinvent 3 | 2023 |
| Glass Landfill | Waste glass {GLO} treatment of waste glass, sanitary landfill Cut-off, U | ecoinvent 3 | 2023 |
| Steel Landfill | Scrap steel {RoW} treatment of scrap steel, inert material landfill Cut-off, U | ecoinvent 3 | 2023 |
| Municipal Solid Waste Landfill | Municipal solid waste {RoW} treatment of municipal solid waste, sanitary landfill Cut-off, U | ecoinvent 3 | 2023 |

3.7. DATA QUALITY

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

 Table 3. Data quality assessment for Claridge Products.

| Data Quality Parameter | Data Quality Discussion |
|---|--|
| Time-Related Coverage: Age of data and the minimum length of time over which data is collected | The most recent available data is used, all of which is less than 5 years old. Manufacturer-supplied data (primary data) are based on annual production and usage for the period of July 2023 to June 2024. |
| Geographical Coverage: Geographical area from which data for unit processes is collected to satisfy the goal of the study | The data used in this study provides the best possible representation available with the most recently published databases for Arkansas. Proxy data used in the model is representative of North American or Global operations. Global data is considered an accurate representation of the actual processes. |
| Technology Coverage: Specific technology or technology mix | For the majority of processes, data utilized is representative of actual processing, transportation, manufacturing, and disposal operations. When direct datasets are not available, appropriate proxies representing similar processes or material components are utilized. |
| Precision: Measure of the variability of the data values for each data expressed | Precision of results is not quantified due to a lack of data. Data collected was for a single year and is assumed to be an appropriate representation of annual operations. |
| Completeness: Percentage of flow that is measured or estimated | The LCA model included all material and energy utilized in the production of Claridge Products. Per the PCR, processes whose total contribution to the final result, with respect to their mass and in relation to all considered impact categories, is less than 1% can be neglected. The sum of the neglected processes did not exceed 5% by mass or by 5% of the considered impact categories. |
| Representativeness: Qualitative assessment of the degree to which the data set reflects the true population of interest | The data for the processes utilized in the model represent typical or average processes as reported by industry wide or representative assessments. As such, among the technologies and equipment represented in these models, some variation may exist when compared to Claridge's actual supply chain. However, these variations are unavoidable as data collection throughout the entire supply chain is not feasible within the scope of this model. |
| Consistency: | |
| Qualitative assessment of whether the study methodology is applied uniformly to the various components of the analysis | This model utilizes consistent data sources. Some variation occurs between life cycle stages where primary data is not available or appropriate. |
| 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 | From the data and sources provided within this document the model and results are highly reproducible by other LCA practitioners. All assumptions and data sources are documented. |
| Sources of the Data: Description of primary and secondary data sources | Primary data including energy use, material use, and outflows from the manufacturing facility represent a full year of actual data and as such is considered high quality. For secondary data, ecoinvent 3.10 or USLCI 12.0 data is used and considered sufficiently high quality. |
| Uncertainty of the Information: Uncertainty related to data and assumptions | The uncertainty of the materials in Claridge products and packaging is low. Actual supplier data for upstream operations was not available so the model relied on representative databases. The databases are recent, but most are lacking geographic specificity. |

3.8 PERIOD UNDER REVIEW

Data was collected from July 2023 to June 2024.

3.9 COMPARABILITY AND BENCHMARKING

The PCR this EPD was based on was written to determine the potential environmental impacts of a furniture workspace product from cradle-to-gate with options. It 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 products. Finally, in accordance with ISO 21930:2017, the comparability of EPDs is limited to those applying a functional unit.

3.10 ESTIMATES AND ASSUMPTIONS

The study assumes the reference service life is 10 years and nine replacements in that service life are included. Allocation of raw materials and utility use was based on a physical (mass and area) basis. Packaging materials are assumed to be disposed in a landfill 100% of the time. Installation materials (spray adhesive, aluminum sheet, buffer solution, oil, caustic soda, epoxy, polymer adhesive, thread locker, mineral spirits, disinfectant, tint, lacquer and lubricant) were reported by the manufacturer and allocated on a physical (mass and area) basis. Water usage from electricity is not included.

End-of-life modeling was based on 2018 US EPA waste statistics, and therefore the study assumes 25.0% of glass materials, 33.1% of steel materials and 17.2% of aluminum materials are recycled at the end of life. For the remaining unrecycled materials, it is assumed that 20% goes to incineration and 80% goes to landfill. All disposal is assumed to travel 100 km by truck and is allocated on a mass and area basis.

3.11 UNITS

All data and results are presented using SI units.

4. Technical Information and Scenarios

4.1 MATERIAL COMPOSITION

The material compositions of all Mobile Glass Whiteboard products represented by this EPD are presented in Table 4 per 1 m² of product. Note that there are no reportable dangerous or hazardous substances, as classified by US regulatory bodies, found in the final form of the products.

| Product | Mina Glas | s Mobile | Mix Conte Glass I | | Mix Ind Glass N | | Switch MB M | | Venue (MB Mo | | X2 Glass M | B Mobile | Recycled Content |
|-----------------------|-----------|----------|----------------------|-------|--------------------|-------|----------------|-------|------------------|-------|------------|----------|---------------------|
| | Percent | kg | Percent | kg | Percent | kg | Percent | kg | Percent | kg | Percent | kg | % |
| ABS | 0.000% | 0.00 | 0.000% | 0.00 | 0.000% | 0.00 | 0.000% | 0.00 | 0.000% | 0.00 | 0.254% | 0.22 | 0.00 |
| Aluminum | 0.000% | 0.00 | 0.000% | 0.00 | 0.000% | 0.00 | 6.838% | 6.39 | 3.172% | 3.37 | 0.000% | 0.00 | 0.00 |
| Aluminum Hardware | 0.000% | 0.00 | 0.000% | 0.00 | 0.000% | 0.00 | 0.000% | 0.00 | 0.000% | 0.00 | 0.034% | 0.03 | 0.00 |
| Ash Wood | 0.000% | 0.00 | 0.094% | 0.11 | 0.094% | 0.11 | 0.000% | 0.00 | 0.000% | 0.00 | 0.000% | 0.00 | 0.00 |
| Extruded Aluminum | 0.000% | 0.00 | 1.229% | 1.43 | 1.234% | 1.43 | 8.314% | 7.77 | 6.857% | 7.28 | 12.498% | 10.70 | 0.00 |
| FAS Ash Wood | 0.000% | 0.00 | 25.908% | 30.25 | 26.005% | 30.25 | 0.000% | 0.00 | 0.000% | 0.00 | 0.000% | 0.00 | 0.00 |
| Forza Adhesive | 0.000% | 0.00 | 0.000% | 0.00 | 0.000% | 0.00 | 0.304% | 0.28 | 0.534% | 0.57 | 0.662% | 0.57 | 0.00 |
| Galvanized Steel | 13.307% | 9.96 | 14.080% | 16.44 | 14.133% | 16.44 | 17.600% | 16.44 | 18.592% | 19.73 | 23.035% | 19.73 | 0.00 |
| Glass | 50.908% | 38.09 | 44.131% | 51.52 | 44.297% | 51.52 | 58.509% | 54.65 | 57.277% | 60.77 | 48.582% | 41.60 | 0.00 |
| Honeycomb (Cardboard) | 0.000% | 0.00 | 3.987% | 4.65 | 4.002% | 4.65 | 0.178% | 0.17 | 7.328% | 7.77 | 0.000% | 0.00 | 0.00 |
| Lacquer | 0.000% | 0.00 | 0.710% | 0.83 | 0.713% | 0.83 | 0.000% | 0.00 | 0.000% | 0.00 | 0.000% | 0.00 | 0.00 |
| Metallic Paint | 0.485% | 0.36 | 0.000% | 0.00 | 0.000% | 0.00 | 0.000% | 0.00 | 0.000% | 0.00 | 0.265% | 0.23 | 0.00 |
| Powder Coating | 2.491% | 1.86 | 1.369% | 1.60 | 1.374% | 1.60 | 2.051% | 1.92 | 1.806% | 1.92 | 2.176% | 1.86 | 0.00 |
| Steel | 28.612% | 21.41 | 4.947% | 5.78 | 4.680% | 5.44 | 2.176% | 2.03 | 0.000% | 0.00 | 6.250% | 5.35 | 0.00 |
| Stainless Steel | 0.000% | 0.00 | 0.000% | 0.00 | 0.016% | 0.02 | 0.000% | 0.00 | 0.000% | 0.00 | 0.000% | 0.00 | 0.00 |
| White Glue | 0.000% | 0.00 | 0.321% | 0.37 | 0.322% | 0.37 | 0.000% | 0.00 | 0.636% | 0.67 | 0.000% | 0.00 | 0.00 |
| Double Sided Tape | 2.136% | 1.60 | 1.141% | 1.33 | 1.145% | 1.33 | 1.426% | 1.33 | 1.506% | 1.60 | 1.866% | 1.60 | 0.00 |
| Caster | 0.788% | 0.59 | 1.349% | 1.57 | 1.246% | 1.45 | 1.686% | 1.57 | 1.484% | 1.57 | 0.689% | 0.59 | 0.00 |
| Fiberglass | 1.273% | 0.95 | 0.734% | 0.86 | 0.737% | 0.86 | 0.918% | 0.86 | 0.808% | 0.86 | 1.112% | 0.95 | 0.00 |
| Pine Wood | 0.000% | 0.00 | 0.000% | 0.00 | 0.000% | 0.00 | 0.000% | 0.00 | 0.000% | 0.00 | 2.577% | 2.21 | 0.00 |
| | | | | | Packaging | | | | | | | | |
| Wood | 69% | 5.62 | 69% | 7.67 | 69% | 7.64 | 69% | 6.14 | 69% | 6.97 | 69% | 5.63 | 0% |
| Steel | 1% | 0.04 | 1% | 0.06 | 1% | 0.06 | 1% | 0.05 | 1% | 0.05 | 1% | 0.04 | 0% |
| Polyester | 0% | 0.00 | 0% | 0.00 | 0% | 0.00 | 0% | 0.00 | 0% | 0.00 | 0% | 0.00 | 50% |
| Cardboard | 23% | 1.90 | 23% | 2.60 | 23% | 2.59 | 23% | 2.08 | 23% | 2.36 | 23% | 1.90 | 75% |

Table 4. Mobile Glass Whiteboard Product Composition

| PPE | 6% | 0.50 | 6% | 0.68 | 6% | 0.68 | 6% | 0.55 | 6% | 0.62 | 6% | 0.50 | 50% |
|--------------------------------------|------|------|-----|------|-----|------|------|------|-------|------|------|------|-----|
| Paper | 0% | 0.00 | 0% | 0.00 | 0% | 0.00 | 0% | 0.00 | 0% | 0.00 | 0% | 0.00 | 0% |
| Polystyrene | 1% | 0.09 | 1% | 0.12 | 1% | 0.12 | 1% | 0.10 | 1% | 0.11 | 1% | 0.09 | 50% |
| Product Total Weight (kg) | 74.8 | 3 | 116 | .75 | 116 | .31 | 93.4 | 40 | 106.1 | 0 | 85.6 | 54 | |
| Product Total Area (m ²) | 1.9 | 5 | 2.2 | 23 | 2.2 | 23 | 2.2 | .3 | 2.23 | 3 | 2.2 | 3 | |
| Product Weight / Area (kg/m²) | 38.3 | 5 | 52. | 36 | 52. | 16 | 41. | 89 | 47.5 | 9 | 38.4 | 11 | |

4.2 MANUFACTURE

Extruded Aluminum at the Harrison Extrusion plant begins with raw aluminum stock. The stock is preheated in a natural gas fired oven and then soldered and pressed through a dye. The pressed stock is then air-cooled by a fan, and then further cooled on a cooling table using compressed air. The stock is then cut to shape and tempered in an oven. Next the aluminum is either anodized or painted. Anodized material undergoes a series of baths and rinse cycles including a sulfuric bath, and caustic soda bath, a mud bath, anodization, sealant and finally a hot water rinse. Painted material is powder coated and cured. Finally, all material is staged, inspected and packaged for shipping to the main Harrison manufacturing plant.

Raw materials arrive at the Harrison manufacturing site. Glass markerboard and tackboards individually are processed and then assembled. Trim is attached and accessories are added. Finally, the final products are packaged and shipped out to the customers.

4.3 PRODUCT TRANSPORT

Table 5. Product Transportation

| Norra | 1 lm:t m ou 1 m ² | Value | | | | |
|-------------------|------------------------------|-------------------|--------------------|--|--|--|
| Name | Unit per 1 m ² | Mina Glass Mobile | X2 Glass MB Mobile | | | |
| Type of transport | - | Truck Transport | | | | |
| Type of vehicle | - | Diesel | | | | |
| Distance | km | 1.33E+03 | 1.36E+03 | | | |

4.4 PRODUCT INSTALLATION

Table 6. Product Installation

| Name | 11 mit may 1 mm ² | Value | | | | | |
|--|---|-------------------|--------------------|--|--|--|--|
| Name | Unit per 1 m ² | Mina Glass Mobile | X2 Glass MB Mobile | | | | |
| Description of the installation process | Product is installed directly onto a wall in accordance with Claridge installation standa | | | | | | |
| Ancillary materials | kg | 0.00E+00 | | | | | |
| Product loss per functional unit | kg | 1.97E+00 | 1.93E+00 | | | | |
| Energy use during installation (by energy carrier) | MJ | 0.00E+00 | 0.00E+00 | | | | |
| Water use during installation (by water source) | m ³ | 0.00E+00 | 0.00E+00 | | | | |
| Direct emissions to ambient air, soil and water | kg | 0.00E+00 | 0.00E+00 | | | | |
| Packaging waste (landfill) | kg | 8.16E+00 | 8.17E+00 | | | | |
| Biogenic carbon content of packaging | kg CO2 | 1.26E+01 | 1.26E+01 | | | | |

4.4 PRODUCT USE

Table 7. Product Use

| Nama | 11mit max 1 m ² | Value | | | | |
|--|----------------------------|-------------------|--------------------|--|--|--|
| Name | Unit per 1 m ² | Mina Glass Mobile | X2 Glass MB Mobile | | | |
| Water consumption (from tap, to sewer) | m ³ | 0.00E+00 | 0.00E+00 | | | |
| Electricity consumption | kWh | 0.00E+00 | 0.00E+00 | | | |
| Other energy carriers | MJ | 0.00E+00 | 0.00E+00 | | | |
| Equipment output | kW | 0.00E+00 | 0.00E+00 | | | |
| Direct emissions to ambient air, soil, and water | kg | 0.00E+00 | 0.00E+00 | | | |

4.5 PRODUCT REPLACEMENT

The replacement (B4) stage is the sum of the impacts for the life cycle of the product

(A1+A2+A3+A4+A5+C1+C2+C3+C4) multiplied by the number of times it is replaced during the 10-year product service life of 10 years. The components of mobile glass markerboards have a warranty of one year, so for this study it was assumed that the product is replaced nine times over a ten-year period.

4.6 DISPOSAL

The end-of-life scenario was modeled based on the 2018 US EPA Advancing Sustainable Materials Management studies. Based on that study it is assumed that 25.0% of glass materials, 33.1% of steel materials and 17.2% of aluminum materials are recycled at the end of life. For the remaining unrecycled materials, it is assumed that 20% goes to incineration and 80% goes to landfill, in accordance with the PCR. 100 kilometers is the distance assumed that the waste travels via truck before final destinations.

| Ν | Jame | Unit per 1 | Value | | |
|---|---|-------------------|------------------------------|--------------|--|
| ľ | m² | Mina Glass Mobile | X2 Glass MB Mobile | | |
| Assumptions for scenario develo | ppment | | 2018 US EPA Statistics and F | PCR Guidance | |
| Collection process (specified | Collected separately | kg | 1.50E+01 | 1.28E+01 | |
| by type) | Collected with mixed construction waste | kg | 2.45E+01 | 2.58E+01 | |
| | Reuse | kg | 0.00E+00 | 0.00E+00 | |
| Decovery (creatified by type) | Recycling | kg | 8.88E+00 | 6.37E+00 | |
| Recovery (specified by type) | Landfill | kg | 2.45E+01 | 2.58E+01 | |
| | Incineration | kg | 6.11E+00 | 6.46E+00 | |
| Disposal (specified by type) Product or material for final deposition | | kg | 3.95E+01 | 3.86E+01 | |
| Removals of biogenic carbon (ex | cluding packaging) | kg C | 0.00E+00 | 1.81E+00 | |

Table 8. Product End-of-Life

5. LCA: Results

Results of the Life Cycle Assessment are presented below per 1 m² of product. 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. Note that inputs and outputs related to combustible material were transformed using the heat of combustion values based on higher heating values (HHVs), in accordance with Section 4.3.3.1 of ISO 14044:2006.

| Parameter | Parameter | Unit per 1 | er 1 Life Cycle Stage | | | | | | | | | | |
|-----------|---|-------------------------|-----------------------|----------|----------|----------|----------|----------|----------|----------|----------|--|--|
| Parameter | Parameter | m² | A1 | A2 | A3 | A4 | A5 | B4 | C2 | C3 | C4 | | |
| GWP | Global warming potential | kg CO ₂ -Eq. | 7.19E+01 | 1.63E+00 | 3.15E+01 | 4.87E+00 | 7.82E+00 | 1.08E+03 | 3.56E-01 | 4.11E-01 | 1.20E+00 | | |
| ODP | Depletion potential of the stratospheric ozone layer | kg CFC-11 Eq. | 7.13E-07 | 6.22E-11 | 2.53E-07 | 1.86E-10 | 5.16E-08 | 9.24E-06 | 1.36E-11 | 2.77E-09 | 6.28E-09 | | |
| AP Air | Acidification potential for air emissions | kg SO ₂ -Eq. | 3.65E-01 | 9.74E-03 | 1.88E-01 | 2.91E-02 | 3.10E-02 | 5.64E+00 | 2.13E-03 | 7.32E-04 | 1.52E-03 | | |
| EP | Eutrophication potential | kg N-Eq. | 1.32E-01 | 5.43E-04 | 1.23E-01 | 1.62E-03 | 1.16E-01 | 3.80E+00 | 1.18E-04 | 9.06E-04 | 4.71E-02 | | |
| SP | Smog formation potential | kg O₃-Eq. | 4.57E+00 | 2.67E-01 | 1.20E+00 | 7.96E-01 | 3.65E-01 | 6.58E+01 | 5.82E-02 | 1.92E-02 | 3.69E-02 | | |
| FFD | Fossil fuel depletion | MJ-surplus | 8.34E+00 | 3.13E+00 | 3.94E+01 | 9.33E+00 | 3.04E+00 | 5.75E+02 | 6.82E-01 | 2.51E-03 | 3.46E-03 | | |

Table 9. Mina Glass Mobile TRACI Results – Minimum Configuration

Table 10. Mix Contemporary Glass Mobile TRACI Results – Base Configuration

| Parameter | Parameter | Unit per 1 | er 1 Life Cycle Stage | | | | | | | | | | | |
|-----------|--|-------------------------|-----------------------|----------|----------|----------|----------|----------|----------|----------|----------|--|--|--|
| Farameter | Falameter | m² | A1 | A2 | A3 | A4 | A5 | B4 | C2 | C3 | C4 | | | |
| GWP | Global warming potential | kg CO2-Eq. | 7.80E+01 | 2.89E+00 | 4.31E+01 | 6.65E+00 | 1.00E+01 | 1.35E+03 | 4.86E-01 | 2.08E+00 | 7.04E+00 | | | |
| ODP | Depletion potential of the stratospheric ozone layer | kg CFC-11 Eq. | 9.00E-07 | 1.10E-10 | 3.45E-07 | 2.54E-10 | 6.70E-08 | 1.20E-05 | 1.85E-11 | 4.51E-09 | 1.14E-08 | | | |
| AP Air | Acidification potential for air emissions | kg SO ₂ -Eq. | 4.55E-01 | 2.08E-02 | 2.56E-01 | 3.97E-02 | 4.07E-02 | 7.39E+00 | 2.90E-03 | 1.62E-03 | 3.50E-03 | | | |
| EP | Eutrophication potential | kg N-Eq. | 1.34E-01 | 1.15E-03 | 1.68E-01 | 2.21E-03 | 1.69E-01 | 7.14E+00 | 1.62E-04 | 3.82E-03 | 3.15E-01 | | | |
| SP | Smog formation potential | kg O₃-Eq. | 5.52E+00 | 5.79E-01 | 1.63E+00 | 1.09E+00 | 4.74E-01 | 8.54E+01 | 7.94E-02 | 4.50E-02 | 6.91E-02 | | | |
| FFD | Fossil fuel depletion | MJ-surplus | 1.17E+01 | 5.54E+00 | 5.38E+01 | 1.27E+01 | 4.24E+00 | 8.01E+02 | 9.31E-01 | 4.58E-03 | 9.24E-03 | | | |

| Devenuetor | Devemeter | Unit per 1 | | | | | | | | | | | | |
|------------|---|-------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--|--|--|
| Parameter | Parameter | m² | A1 | A2 | A3 | A4 | A5 | B4 | C2 | C3 | C4 | | | |
| GWP | Global warming potential | kg CO ₂ -Eq. | 1.30E+02 | 1.70E+00 | 3.16E+01 | 4.88E+00 | 1.07E+01 | 1.63E+03 | 3.56E-01 | 4.99E-01 | 1.55E+00 | | | |
| ODP | Depletion potential of the stratospheric ozone layer | kg CFC-11 Eq. | 1.29E-06 | 6.47E-11 | 2.53E-07 | 1.86E-10 | 8.05E-08 | 1.47E-05 | 1.36E-11 | 2.92E-09 | 7.45E-09 | | | |
| AP Air | Acidification potential for air emissions | kg SO ₂ -Eq. | 8.11E-01 | 1.01E-02 | 1.88E-01 | 2.91E-02 | 5.34E-02 | 9.87E+00 | 2.13E-03 | 8.36E-04 | 1.87E-03 | | | |
| EP | Eutrophication potential | kg N-Eq. | 4.25E-01 | 5.65E-04 | 1.23E-01 | 1.62E-03 | 1.32E-01 | 6.70E+00 | 1.18E-04 | 1.01E-03 | 6.08E-02 | | | |
| SP | Smog formation potential | kg O₃-Eq. | 9.13E+00 | 2.77E-01 | 1.20E+00 | 7.97E-01 | 5.94E-01 | 1.09E+02 | 5.82E-02 | 2.25E-02 | 4.36E-02 | | | |
| FFD | Fossil fuel depletion | MJ-surplus | 2.37E+01 | 3.25E+00 | 3.94E+01 | 9.34E+00 | 3.82E+00 | 7.21E+02 | 6.82E-01 | 2.65E-03 | 5.23E-03 | | | |

Table 11. X2 Glass MB Mobile TRACI Results – Maximum Configuration

Table 12. Mina Glass Mobile CML Results - Minimum Configuration

| Deremeter | Davamatar | Unit per 1 | r 1 Life Cycle Stage | | | | | | | | | | | |
|-----------|--|---------------------------------------|----------------------|----------|----------|----------|----------|----------|----------|----------|----------|--|--|--|
| Parameter | Parameter | m² | A1 | A2 | A3 | A4 | A5 | B4 | C2 | С3 | C4 | | | |
| GWP | Global warming potential | kg CO2-Eq. | 7.25E+01 | 1.64E+00 | 3.24E+01 | 4.88E+00 | 8.44E+00 | 1.10E+03 | 3.57E-01 | 4.12E-01 | 1.45E+00 | | | |
| ODP | Depletion potential of the stratospheric ozone layer | kg CFC-11 Eq. | 5.21E-07 | 6.17E-11 | 1.71E-07 | 1.84E-10 | 3.70E-08 | 6.63E-06 | 1.35E-11 | 2.06E-09 | 4.62E-09 | | | |
| AP Air | Acidification potential for air emissions | kg SO2-Eq. | 3.32E-01 | 8.04E-03 | 2.07E-01 | 2.40E-02 | 2.99E-02 | 5.44E+00 | 1.75E-03 | 6.04E-04 | 1.26E-03 | | | |
| EP | Eutrophication potential | kg(PO4) ³ -Eq. | 7.78E-02 | 1.42E-03 | 5.15E-02 | 4.25E-03 | 4.57E-02 | 1.79E+00 | 3.11E-04 | 4.47E-04 | 1.72E-02 | | | |
| POCP | Formation potential of tropospheric ozone photochemical oxidants | kg C ₂ H ₄ -Eq. | 2.47E-02 | 3.71E-04 | 1.75E-02 | 1.11E-03 | 2.82E-03 | 4.22E-01 | 8.09E-05 | 4.19E-05 | 3.17E-04 | | | |
| ADPE | Abiotic depletion potential for non-fossil resources | kg Sb-Eq. | 9.95E-04 | 0.00E+00 | 2.84E-05 | 0.00E+00 | 5.15E-05 | 9.69E-03 | 0.00E+00 | 3.91E-07 | 4.55E-07 | | | |
| ADPF | Abiotic depletion potential for fossil resources | MJ | 3.90E+02 | 2.10E+01 | 3.06E+02 | 6.26E+01 | 3.95E+01 | 7.42E+03 | 4.58E+00 | 2.75E-01 | 3.78E-01 | | | |

Table 13. Mix Contemporary Glass Mobile CML Results - Base Configuration

| Deveneter | Dowowskow | Unit per 1 | Life Cycle Stage | | | | | | | | | | |
|-----------|--|---------------------------------------|------------------|----------|----------|----------|----------|----------|----------|----------|----------|--|--|
| Parameter | Parameter | m² | A1 | A2 | A3 | A4 | A5 | B4 | C2 | C3 | C4 | | |
| GWP | Global warming potential | kg CO2-Eq. | 7.86E+01 | 2.90E+00 | 4.43E+01 | 6.67E+00 | 1.09E+01 | 1.39E+03 | 4.87E-01 | 2.07E+00 | 8.67E+00 | | |
| ODP | Depletion potential of the stratospheric ozone layer | kg CFC-11 Eq. | 6.20E-07 | 1.09E-10 | 2.34E-07 | 2.51E-10 | 4.61E-08 | 8.21E-06 | 1.84E-11 | 3.45E-09 | 8.24E-09 | | |
| AP Air | Acidification potential for air emissions | kg SO ₂ -Eq. | 4.08E-01 | 1.70E-02 | 2.83E-01 | 3.28E-02 | 3.90E-02 | 7.07E+00 | 2.39E-03 | 1.30E-03 | 2.97E-03 | | |
| EP | Eutrophication potential | kg(PO4) ³ -Eq. | 8.41E-02 | 3.08E-03 | 7.03E-02 | 5.80E-03 | 6.60E-02 | 3.11E+00 | 4.24E-04 | 1.67E-03 | 1.15E-01 | | |
| POCP | Formation potential of tropospheric ozone photochemical oxidants | kg C ₂ H ₄ -Eq. | 2.66E-02 | 6.89E-04 | 2.39E-02 | 1.51E-03 | 3.57E-03 | 5.25E-01 | 1.10E-04 | 6.35E-05 | 1.86E-03 | | |
| ADPE | Abiotic depletion potential for non-fossil resources | kg Sb-Eq. | 3.18E-03 | 0.00E+00 | 3.88E-05 | 0.00E+00 | 1.61E-04 | 3.04E-02 | 0.00E+00 | 6.34E-07 | 9.51E-07 | | |
| ADPF | Abiotic depletion potential for fossil resources | MJ | 4.12E+02 | 3.72E+01 | 4.18E+02 | 8.55E+01 | 4.84E+01 | 9.08E+03 | 6.25E+00 | 5.02E-01 | 1.01E+00 | | |

Table 14. X2 Glass MB Mobile CML Results - Maximum Configuration

| Daramatar | Davamatav | Unit per 1 | Er 1 Life Cycle Stage | | | | | | | | | | |
|-----------|--|--|-----------------------|----------|----------|----------|----------|----------|----------|----------|----------|--|--|
| Parameter | Parameter | m² | A1 | A2 | A3 | A4 | A5 | B4 | C2 | С3 | C4 | | |
| GWP | Global warming potential | kg CO ₂ -Eq. | 1.31E+02 | 1.70E+00 | 3.25E+01 | 4.89E+00 | 1.14E+01 | 1.66E+03 | 3.57E-01 | 4.99E-01 | 1.87E+00 | | |
| ODP | Depletion potential of the stratospheric ozone layer | kg CFC-11 Eq. | 8.18E-07 | 6.41E-11 | 1.72E-07 | 1.84E-10 | 5.20E-08 | 9.45E-06 | 1.35E-11 | 2.17E-09 | 5.43E-09 | | |
| AP Air | Acidification potential for air emissions | kg SO ₂ -Eq. | 7.71E-01 | 8.36E-03 | 2.07E-01 | 2.40E-02 | 5.19E-02 | 9.60E+00 | 1.75E-03 | 6.83E-04 | 1.57E-03 | | |
| EP | Eutrophication potential | kg(PO ₄) ³ -Eq. | 2.23E-01 | 1.48E-03 | 5.15E-02 | 4.26E-03 | 5.33E-02 | 3.21E+00 | 3.11E-04 | 4.98E-04 | 2.23E-02 | | |
| POCP | Formation potential of tropospheric ozone photochemical oxidants | kg C ₂ H ₄ -Eq. | 4.73E-02 | 3.85E-04 | 1.75E-02 | 1.11E-03 | 3.95E-03 | 6.37E-01 | 8.09E-05 | 4.29E-05 | 4.03E-04 | | |
| ADPE | Abiotic depletion potential for non-fossil resources | kg Sb-Eq. | 1.33E-02 | 0.00E+00 | 2.84E-05 | 0.00E+00 | 6.67E-04 | 1.26E-01 | 0.00E+00 | 4.10E-07 | 6.46E-07 | | |
| ADPF | Abiotic depletion potential for fossil resources | MJ | 8.04E+02 | 2.18E+01 | 3.06E+02 | 6.27E+01 | 6.03E+01 | 1.13E+04 | 4.58E+00 | 2.90E-01 | 5.71E-01 | | |

| Parameter | Parameter | Unit per 1 | | | | L | ife Cycle Stag | ge | | | |
|-------------------|--|----------------|----------|----------|----------|----------|----------------|----------|----------|----------|-----------|
| Parameter | Parameter | m² | A1 | A2 | A3 | A4 | A5 | B4 | C2 | С3 | C4 |
| RPRE | Renewable primary energy as energy carrier | MJ | 4.71E+01 | 0.00E+00 | 2.37E+02 | 0.00E+00 | 1.43E+01 | 2.69E+03 | 0.00E+00 | 4.25E-02 | 7.57E-02 |
| RPRM | Renewable primary energy resources as material utilization | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| NRPR _E | Nonrenewable primary energy as energy carrier | MJ | 3.82E+02 | 2.10E+01 | 3.13E+02 | 6.26E+01 | 4.19E+01 | 7.44E+03 | 4.58E+00 | 3.15E-01 | 4.64E-01 |
| NRPRM | Nonrenewable primary energy as material utilization | MJ | 4.77E+01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.38E+00 | 4.51E+02 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| SM | Use of secondary material | kg | 0.00E+00 | 0.00E+00 | 1.81E+00 | 0.00E+00 | 0.00E+00 | 1.63E+01 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| RSF | Use of renewable secondary fuels | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| NRSF | Use of nonrenewable secondary fuels | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| RE | Energy recovered from disposed waste | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| FW | Use of net fresh water | m ³ | 3.79E-01 | 0.00E+00 | 1.51E+01 | 0.00E+00 | 7.40E-01 | 1.45E+02 | 0.00E+00 | 1.96E-03 | -5.03E-02 |

Table 15. Mina Glass Mobile Resource Use Results – Minimum Configuration

Table 16. Mix Contemporary Glass Mobile Resource Use Results – Base Configuration

| Parameter | Parameter | Unit per 1 | | | | L | ife Cycle Stag | ;e | | | |
|----------------|--|----------------|----------|----------|----------|----------|----------------|----------|----------|----------|-----------|
| i di dificteri | | m ² | A1 | A2 | A3 | A4 | A5 | B4 | C2 | C3 | C4 |
| RPRE | Renewable primary energy as energy carrier | MJ | 4.95E+02 | 0.00E+00 | 3.23E+02 | 0.00E+00 | 4.10E+01 | 7.74E+03 | 0.00E+00 | 7.64E-02 | 2.11E-01 |
| RPRM | Renewable primary energy resources as material utilization | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| NRPRE | Nonrenewable primary energy as energy carrier | MJ | 1.38E+02 | 3.72E+01 | 4.28E+02 | 8.55E+01 | 5.15E+01 | 6.74E+03 | 6.25E+00 | 5.70E-01 | 1.27E+00 |
| NRPRM | Nonrenewable primary energy as material utilization | MJ | 3.23E+02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.62E+01 | 3.06E+03 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| SM | Use of secondary material | kg | 0.00E+00 | 0.00E+00 | 2.47E+00 | 0.00E+00 | 0.00E+00 | 2.23E+01 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| RSF | Use of renewable secondary fuels | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| NRSF | Use of nonrenewable secondary fuels | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| RE | Energy recovered from disposed waste | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| FW | Use of net fresh water | m ³ | 3.92E-01 | 0.00E+00 | 2.06E+01 | 0.00E+00 | 1.00E+00 | 1.97E+02 | 0.00E+00 | 5.42E-03 | -1.09E-01 |

| Daramatar | Devemeter | Unit per 1 | | | | Li | ife Cycle Stag | ge | | | |
|-------------------|--|----------------|----------|----------|----------|----------|----------------|----------|----------|----------|-----------|
| Parameter | Parameter | m² | A1 | A2 | A3 | A4 | A5 | B4 | C2 | С3 | C4 |
| RPRE | Renewable primary energy as energy carrier | MJ | 1.83E+02 | 0.00E+00 | 2.37E+02 | 0.00E+00 | 2.11E+01 | 3.97E+03 | 0.00E+00 | 4.47E-02 | 1.17E-01 |
| RPRM | Renewable primary energy resources as material utilization | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| NRPR _E | Nonrenewable primary energy as energy carrier | MJ | 8.20E+02 | 2.18E+01 | 3.13E+02 | 6.27E+01 | 6.48E+01 | 1.16E+04 | 4.58E+00 | 3.32E-01 | 7.08E-01 |
| NRPRM | Nonrenewable primary energy as material utilization | MJ | 6.59E+01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.30E+00 | 6.23E+02 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| SM | Use of secondary material | kg | 0.00E+00 | 0.00E+00 | 1.81E+00 | 0.00E+00 | 0.00E+00 | 1.63E+01 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| RSF | Use of renewable secondary fuels | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| NRSF | Use of nonrenewable secondary fuels | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| RE | Energy recovered from disposed waste | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| FW | Use of net fresh water | m ³ | 5.71E-01 | 0.00E+00 | 1.51E+01 | 0.00E+00 | 7.49E-01 | 1.47E+02 | 0.00E+00 | 2.16E-03 | -6.36E-02 |

Table 17. X2 Glass MB Mobile Resource Use Results – Maximum Configuration

Table 18. Mina Glass Mobile Output Flows and Waste Categories – Minimum Configuration

| Deveneter | Parameter | Unit per 1 | 1 Life Cycle Stage | | | | | | | | | | | |
|-----------|--|------------|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|--|--|--|
| Parameter | Parameter | m² | A1 | A2 | A3 | A4 | A5 | B4 | C2 | C3 | C4 | | | |
| HWD | Hazardous waste disposed | kg | 7.24E-03 | 0.00E+00 | 1.31E-03 | 0.00E+00 | 4.46E-04 | 8.14E-02 | 0.00E+00 | 1.66E-05 | 3.35E-05 | | | |
| NHWD | Non-hazardous waste disposed | kg | 4.39E+00 | 0.00E+00 | 5.30E+00 | 0.00E+00 | 1.01E+01 | 4.33E+02 | 0.00E+00 | 5.14E+00 | 2.32E+01 | | | |
| HLRW | High-level radioactive waste | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | | |
| ILLRW | Intermediate- and low-level radioactive waste | kg | 4.71E-04 | 0.00E+00 | 1.06E-04 | 0.00E+00 | 2.99E-05 | 5.48E-03 | 0.00E+00 | 5.87E-07 | 1.30E-06 | | | |
| CRU | Components for re-use | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | | |
| MR | Materials for recycling | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | | |
| MER | Materials for energy recovery | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | | |
| EE | Recovered energy exported from system | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | | |

| Daramatar | Devemeter | Unit per 1 | | | | Li | ife Cycle Stag | ge | | | |
|-----------|--|------------|----------|----------|----------|----------|----------------|----------|----------|----------|----------|
| Parameter | Parameter | m² | A1 | A2 | A3 | A4 | A5 | B4 | C2 | C3 | C4 |
| HWD | Hazardous waste disposed | kg | 1.58E-02 | 0.00E+00 | 1.80E-03 | 0.00E+00 | 9.03E-04 | 1.67E-01 | 0.00E+00 | 2.67E-05 | 6.05E-05 |
| NHWD | Non-hazardous waste disposed | kg | 3.84E+00 | 0.00E+00 | 7.22E+00 | 0.00E+00 | 1.38E+01 | 5.92E+02 | 0.00E+00 | 6.07E+00 | 3.49E+01 |
| HLRW | High-level radioactive waste | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| ILLRW | Intermediate- and low-level radioactive waste | kg | 5.63E-04 | 0.00E+00 | 1.44E-04 | 0.00E+00 | 3.70E-05 | 6.75E-03 | 0.00E+00 | 9.82E-07 | 3.92E-06 |
| CRU | Components for re-use | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| MR | Materials for recycling | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| MER | Materials for energy recovery | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| EE | Recovered energy exported from system | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

Table 19. Mix Contemporary Glass Mobile Output Flows and Waste Categories – Base Configuration

Table 20. X2 Glass MB Mobile Output Flows and Waste Categories – Maximum Configuration

| Devementer | Parameter | Unit per 1 | | | | | Life Cycle Sta | ge | | | |
|------------|---|------------|----------|----------|----------|----------|----------------|----------|----------|----------|----------|
| Parameter | Parameter | m² | A1 | A2 | A3 | A4 | A5 | B4 | C2 | C3 | C4 |
| HWD | Hazardous waste disposed | kg | 5.08E-02 | 0.00E+00 | 1.32E-03 | 0.00E+00 | 2.63E-03 | 4.93E-01 | 0.00E+00 | 1.74E-05 | 4.03E-05 |
| NHWD | Non-hazardous waste disposed | kg | 4.47E+00 | 0.00E+00 | 5.30E+00 | 0.00E+00 | 1.01E+01 | 4.38E+02 | 0.00E+00 | 5.25E+00 | 2.35E+01 |
| HLRW | High-level radioactive waste | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| ILLRW | Intermediate- and low-level radioactive waste | kg | 1.01E-03 | 0.00E+00 | 1.06E-04 | 0.00E+00 | 5.71E-05 | 1.06E-02 | 0.00E+00 | 6.13E-07 | 2.07E-06 |
| CRU | Components for re-use | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| MR | Materials for recycling | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| MER | Materials for energy recovery | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| EE | Recovered energy exported from system | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

| Deverenteer | Duranta | Unit per 1 | Der 1 Life Cycle Stage | | | | | | | | | | |
|-------------|--|--------------------|------------------------|----------|----------|----------|----------|----------|----------|----------|----------|--|--|
| Parameter | Parameter | m ² | A1 | A2 | A3 | A4 | A5 | B4 | C2 | C3 | C4 | | |
| BCRP | Biogenic Carbon Removal from Product | kg CO ₂ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | |
| BCEP | Biogenic Carbon Emissions from Product | kg CO ₂ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | |
| BCRK | Biogenic Carbon Removal from Packaging | kg CO2 | 1.27E+01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.14E+02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | |
| BCEK | Biogenic Carbon Emissions from Packaging | kg CO ₂ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.27E+01 | 1.14E+02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | |
| BCEW | Biogenic Carbon Emissions from Combustion of Waste from Renewable Sources Used in Production Process | kg CO ₂ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | |
| CCE | Calcination Carbon Emissions | kg CO2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | |
| CCR | Carbonation Carbon Removal | kg CO ₂ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | |
| CWNR | Carbon Emissions from Combustion of Waste from Non-renewable Sources Used in Production Process | kg CO ₂ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | |

Table 21. Mina Glass Mobile Resource Use - Biogenic Carbon Results - Minimum Configuration

Table 22. Mix Contemporary Glass Mobile Resource Use – Biogenic Carbon Results – Base Configuration

| Developmenter | Parameter | Unit per 1 | t per 1 Life Cycle Stage | | | | | | | | | | |
|---------------|--|--------------------|--------------------------|----------|----------|----------|----------|----------|----------|----------|----------|--|--|
| Parameter | Farameter | m² | A1 | A2 | A3 | A4 | A5 | B4 | C2 | C3 | C4 | | |
| BCRP | Biogenic Carbon Removal from Product | kg CO2 | 2.78E+01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.50E+02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | |
| BCEP | Biogenic Carbon Emissions from Product | kg CO2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.39E+00 | 2.63E+02 | 0.00E+00 | 0.00E+00 | 2.78E+01 | | |
| BCRK | Biogenic Carbon Removal from Packaging | kg CO2 | 1.73E+01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.55E+02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | |
| BCEK | Biogenic Carbon Emissions from Packaging | kg CO ₂ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.73E+01 | 1.55E+02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | |
| BCEW | Biogenic Carbon Emissions from Combustion of Waste from Renewable Sources Used in Production Process | kg CO ₂ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | |
| CCE | Calcination Carbon Emissions | kg CO ₂ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | |
| CCR | Carbonation Carbon Removal | kg CO2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | |
| CWNR | Carbon Emissions from Combustion of Waste from Non-renewable Sources Used in Production Process | kg CO ₂ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | |

| Deverenter | Demonstern | Unit per 1 | er 1 Life Cycle Stage | | | | | | | | | | |
|------------|--|--------------------|-----------------------|----------|----------|----------|----------|----------|----------|----------|----------|--|--|
| Parameter | Parameter | m ² | A1 | A2 | A3 | A4 | A5 | B4 | C2 | C3 | C4 | | |
| BCRP | Biogenic Carbon Removal from Product | kg CO2 | 1.81E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.63E+01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | |
| BCEP | Biogenic Carbon Emissions from Product | kg CO ₂ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.07E-02 | 1.72E+01 | 0.00E+00 | 0.00E+00 | 1.81E+00 | | |
| BCRK | Biogenic Carbon Removal from Packaging | kg CO2 | 1.27E+01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.14E+02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | |
| BCEK | Biogenic Carbon Emissions from Packaging | kg CO2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.27E+01 | 1.14E+02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | |
| BCEW | Biogenic Carbon Emissions from Combustion of Waste from Renewable Sources Used in Production Process | kg CO ₂ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | |
| CCE | Calcination Carbon Emissions | kg CO2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | |
| CCR | Carbonation Carbon Removal | kg CO ₂ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | |
| CWNR | Carbon Emissions from Combustion of Waste from Non-renewable Sources Used in Production Process | kg CO ₂ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | |

Table 23. X2 Glass MB Mobile Resource Use – Biogenic Carbon Results – Maximum Configuration

Table 24. Mina Glass Mobile – IPCC6 GWP100 – Minimum Configuration

| Parameter | Parameter | Unit per 1 | Life Cycle Stage | | | | | | | | | | |
|-----------|--|-------------------------|------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--|--|
| | | m ² | A1 | A2 | A3 | A4 | A5 | B4 | C2 | C3 | C4 | | |
| | Global warming potential, Fossil | kg CO ₂ -Eq. | 7.26E+01 | 1.64E+00 | 3.01E+01 | 4.89E+00 | 5.69E+00 | 1.04E+03 | 3.58E-01 | 4.13E-01 | 3.02E-01 | | |
| | Global warming potential, Biogenic including CO ₂ Uptake | kg CO2-Eq. | 1.72E+00 | 1.07E-03 | 6.57E+00 | 3.18E-03 | 4.00E+00 | 1.29E+02 | 2.33E-04 | 4.50E-01 | 1.55E+00 | | |
| GWP100 | Global warming potential, Land Transformation | kg CO2-Eq. | 6.88E-02 | 0.00E+00 | 1.38E-02 | 0.00E+00 | 4.25E-03 | 7.86E-01 | 0.00E+00 | 2.80E-04 | 1.33E-04 | | |
| | Global warming potential, CO2 Uptake | kg CO2-Eq. | -1.55E+00 | -1.07E-03 | -1.41E+01 | -3.18E-03 | -7.83E-01 | -1.48E+02 | -2.33E-04 | -1.61E-03 | -2.20E-03 | | |
| | Global warming potential, Biogenic without CO ₂ Uptake | kg CO2-Eq. | 1.97E-01 | 0.00E+00 | 2.45E+00 | 0.00E+00 | 2.68E+00 | 5.79E+01 | 0.00E+00 | 1.33E-04 | 1.11E+00 | | |

Table 25. Mix Contemporary Glass Mobile – IPCC6 GWP100 – Base Configuration

| Deremeter | Parameter | Unit per 1 | Life Cycle Stage | | | | | | | | | | |
|--------------------|--|-------------------------|------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--|--|
| Parameter | | m² | A1 | A2 | A3 | A4 | A5 | B4 | C2 | C3 | C4 | | |
| | Global warming potential, Fossil | kg CO2-Eq. | 7.83E+01 | 2.91E+00 | 4.11E+01 | 6.68E+00 | 6.87E+00 | 1.25E+03 | 4.88E-01 | 2.08E+00 | 9.64E-01 | | |
| | Global warming potential, Biogenic including CO ₂ Uptake | kg CO ₂ -Eq. | 7.24E+00 | 1.89E-03 | 8.97E+00 | 4.35E-03 | 6.23E+00 | 3.21E+02 | 3.18E-04 | 2.77E+00 | 1.04E+01 | | |
| GWP ₁₀₀ | Global warming potential, Land Transformation | kg CO ₂ -Eq. | 1.08E-01 | 0.00E+00 | 1.89E-02 | 0.00E+00 | 6.52E-03 | 1.21E+00 | 0.00E+00 | 5.51E-04 | 3.31E-04 | | |
| | Global warming potential, CO₂ Uptake | kg CO ₂ -Eq. | -3.08E+01 | -1.89E-03 | -1.92E+01 | -4.35E-03 | -2.50E+00 | -4.73E+02 | -3.18E-04 | -3.01E-03 | -5.08E-03 | | |
| | Global warming potential, Biogenic without CO ₂ Uptake | kg CO ₂ -Eq. | 5.35E-01 | 0.00E+00 | 3.34E+00 | 0.00E+00 | 3.97E+00 | 1.38E+02 | 0.00E+00 | 3.33E-04 | 7.45E+00 | | |

Table 26. X2 Glass MB Mobile – IPCC6 GWP100 – Maximum Configuration

| Parameter | Parameter | Unit per 1 | per 1 Life Cycle Stage | | | | | | | | | | |
|-----------|--|-------------------------|------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--|--|
| | | m² | A1 | A2 | A3 | A4 | A5 | B4 | C2 | С3 | C4 | | |
| | Global warming potential, Fossil | kg CO ₂ -Eq. | 1.31E+02 | 1.71E+00 | 3.01E+01 | 4.90E+00 | 8.63E+00 | 1.60E+03 | 3.58E-01 | 5.00E-01 | 3.92E-01 | | |
| | Global warming potential, Biogenic including CO ₂ Uptake | kg CO2-Eq. | 2.19E+00 | 1.11E-03 | 6.58E+00 | 3.19E-03 | 4.05E+00 | 1.39E+02 | 2.33E-04 | 5.73E-01 | 2.00E+00 | | |
| GWP100 | Global warming potential, Land Transformation | kg CO ₂ -Eq. | 3.14E-01 | 0.00E+00 | 1.39E-02 | 0.00E+00 | 1.65E-02 | 3.10E+00 | 0.00E+00 | 2.97E-04 | 2.30E-04 | | |
| | Global warming potential, CO2 Uptake | kg CO2-Eq. | -3.93E+00 | -1.11E-03 | -1.41E+01 | -3.19E-03 | -9.03E-01 | -1.70E+02 | -2.33E-04 | -1.71E-03 | -3.14E-03 | | |
| | Global warming potential, Biogenic without CO ₂ Uptake | kg CO2-Eq. | 2.61E-01 | 0.00E+00 | 2.45E+00 | 0.00E+00 | 2.70E+00 | 6.15E+01 | 0.00E+00 | 1.41E-04 | 1.43E+00 | | |

6. LCA: Interpretation

When evaluating the full cradle-to-gate with options results, the replacement (B4) stage is the primary driver of results for all impact categories. However, as described in Section 4.5, the replacement stage accounts for product replacement across a ten-year period and is the sum of A1-A5 and C1-C4. Therefore, when evaluating one product without replacements, the product production stage (A1-A3) is the primary driver of results for most impact categories for Mobile Glass Whiteboards. The exception is eutrophication, in which either the product production stage (A1-A3) or the waste disposal stage (C4) are the driving stages, depending on the specific product.

While quality control was undertaken at each step in building the LCI and conducting the LCIA, uncertainty is still present in the results since the data evaluated represents only one year of manufacturing information. Some level of uncertainty is inherent in conducting LCA and decision making must reflect this fact. Additionally, 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 products as outlined in Sections 3.0 and 4.0 of this EPD.

7. Additional Environmental Information

7.1 ENVIRONMENT AND HEALTH DURING MANUFACTURING

Claridge Products and Equipment has implemented a comprehensive employee health and safety program in all its manufacturing facilities. Safety team leaders regularly review and analyze all materials used during manufacturing to ensure employee wellbeing. Claridge Products and Equipment meets or exceeds all OSHA requirements.

7.2 ENVIRONMENT AND HEALTH DURING INSTALLATION OR USE

No damage to health or impairment is expected under normal use corresponding to the intended use or installation of the product following standard guidelines.

7.5 ENVIRONMENTAL ACTIVITIES AND CERTIFICATIONS

We are committed to protecting and preserving our natural environment through a variety of ongoing programs and certifications. Claridge Cork is made from the bark of cork oak trees without damaging the tree itself – making it both rapidly renewable and recyclable. Our carton and crating materials are composed of post-industrial and recycled materials. Tons of material are eliminated from the landfill waste stream through our in-house recycling programs. Our Mobile Glass Whiteboards (excluding wood trim units) have achieved SCS Indoor Advantage™ Gold certification.

7.6 FURTHER INFORMATION

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8. References

- 1. Claridge Products Life Cycle Assessment, Sustainable Solutions Corporation, April 2025
- 2. ISO 14025:2006 Environmental labels and declarations Type III environmental declarations Principles and Procedures.
- 3. ISO 14040: 2006 Environmental Management Life cycle assessment Principles and Framework
- 4. ISO 14044: 2006/Amd 1:2017/ Amd 2:2020 Environmental Management Life cycle assessment Requirements and Guidelines.
- 5. ISO 21930: 2017 Sustainability in building construction Environmental declaration of building products.
- 6. SCS Type III Environmental Declaration Program: Program Operator Manual. V12.0 December 2023. SCS Global Services.
- 7. BIFMA PCR for Office Furniture Workspace Products: UNCPC 3814, V2. NSF International. Valid through January 2030.

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