

# Environmental Product Declaration



According to  
ISO 21930:2017

## Johnsonite BaseWorks™ Thermoset Rubber Wall Base

A natural fusion of aesthetics, performance and sustainability, BaseWorks™ thermoset rubber wall base delivers pure, uniform color and an attractive matte finish. Its flexibility makes installation quick, easy and inexpensive. Plus, it won't fade, crack or separate from the wall. BaseWorks™ is Cradle to Cradle certified.

---

### 100% Renewable Energy

Manufactured with 100% renewable energy through Tarkett's renewable energy investment.

---

### Embodied Carbon – 2.5" (6.35cm) height, cradle to gate (A1-A3) – with Renewable Energy Credits



0.652 kg CO2 eq. (per 1 m of product)

---

### Embodied Carbon – 4" (10.16cm) height, cradle to gate (A1-A3) – with Renewable Energy Credits



0.945 kg CO2 eq. (per 1 m of product)

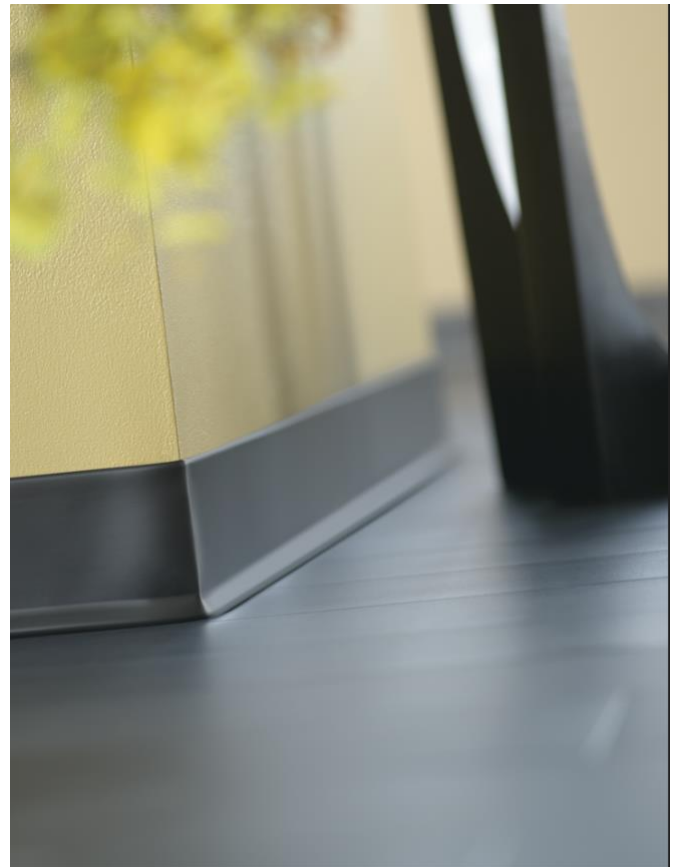
---

### Embodied Carbon – 6" (15.24cm) height, cradle to gate (A1-A3) – with Renewable Energy Credits



1.11 kg CO2 eq. (per 1 m of product)

---



For years, Tarkett has raised the sustainability standards of the flooring industry. It purposefully designs floors with total transparency to create healthier, safer spaces for both people and planet. Committed to changing the game with circular economy and to reducing its carbon footprint, the Group has implemented an eco-innovation strategy based on Cradle to Cradle principles, fully aligned with its Tarkett Human-Conscious Design® approach. When Tarkett floors reach their end of life, the company's ReStart® program makes it possible for them to be repurposed or recycled.

# Environmental Product Declaration

## Johnsonite BaseWorks™ Thermoset Rubber Wall Base



EPD Program Operator Name, Logo, Address, and Website



ASTM International – WWW.ASTM.ORG  
100 Barr Harbor Dr., West Conshohocken, PA

|  |   |  |  |
|--|---|--|--|
| General Program Instructions and Version Number  | ASTM General Program Instructions. V.8.0, April 29, 2020  |  |  |
| Manufacturer Name and Address  | Tarkett Johnsonite, 16035 Industrial Pkwy, Middlefield, OH 44062  |  |  |
| Declaration Number   | EPD 447   |  |  |
| Declared Product & Functional Unit or Declared Unit  | 1 m of installed wall base product  |  |  |
| Reference PCR and Version Number   | ISO 219030:2017 serves as the core PCR and UL Part A  |  |  |
| Description of product application/use   | Wall border to connect the space between the wall and the floor   |  |  |
| Market(s) of applicability   | Commercial  |  |  |
| Product RSL Description (if Appl.)   | 35 years  |  |  |
| Date of Issue  | 06/01/2023  |  |  |
| Period of Validity   | 5 years   |  |  |
| EPD Type   | Product specific  |  |  |
| EPD Scope  | Cradle to gate (A1-A3)  |  |  |
| Year(s) of reported primary data   | 2020  |  |  |
| LCA Software & Version Number  | SimaPro v9.4.0.1  |  |  |
| LCI Database(s) & Version Number   | Ecoinvent v3.8 compiled in November 2021<br>DATASMART LCI, Long Trail Sustainability, version 2021.1                                  |  |  |
| LCIA Methodology & Version Number  | TRACI 2.1   |  |  |
| PART A PCR review was conducted by:  | Lindita Bushi, PhD, Chair, Athena Sustainable Materials Institute<br>Hugues Imbeault-Tétreault - Groupe AGÉCO<br>Jack Geibig, Ecoform |  |  |
| This declaration was independently verified in accordance with ISO 21930:2017, UL Part A, and ISO 14025: 2006.<br><input type="checkbox"/> INTERNAL <input checked="" type="checkbox"/> EXTERNAL |    |  | Timothy S. Brooke                      |
|  |   |  | ASTM International                     |
| This life cycle assessment was conducted in accordance with ISO 14044 and the reference PCR by:  |   |  | Cher Xue                               |
|  |   |  | TrueNorth Collective                   |
| This life cycle assessment was independently verified in accordance with ISO 14044 and the reference PCR by:   |    |  | Lindita Bushi, PhD                     |
|  |   |  | Athena Sustainable Materials Institute |

### Limitations

Environmental declarations from different programs (ISO 14025) may not be comparable.

Comparison of the environmental performance of Wall Base Products using EPD information shall be based on the product's use and impacts at the construction works level, and therefore EPDs may not be used for comparability purposes when not considering the construction works energy use phase as instructed under this PCR.

Full conformance with the PCR for Wall Base Products allows EPD comparability only when all stages of a life cycle have been considered, when they comply with all referenced standards, use the same sub-category Part B PCR, and use equivalent scenarios with respect to construction works. 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.

# Environmental Product Declaration

Johnsonite BaseWorks™

Thermoset Rubber Wall Base



## Product Definition and Information

### 1.1. Description of Company/Organization

With a history of 140 years, Tarkett is a worldwide leader in innovative flooring and sports surface solutions, with net sales of €2.8 billion in 2021. Offering a wide range of products including vinyl, linoleum, rubber, carpet, wood, laminate, artificial turf and athletic tracks, the Group serves customers in over 100 countries across the globe. Tarkett has 12,000 employees and 34 industrial sites, and sells 1.3 million square meters of flooring every day, for hospitals, schools, housing, hotels, offices, stores and sports fields.

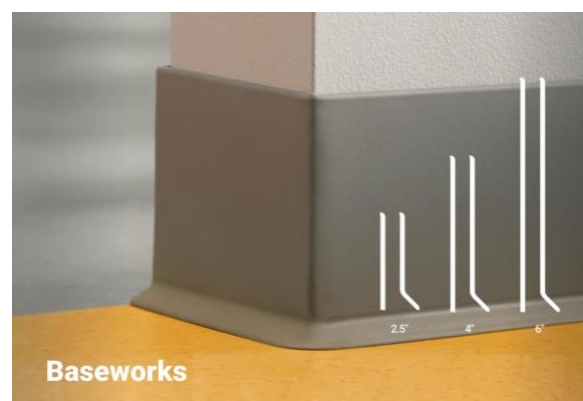
### 1.2. Product Description

#### Product Identification

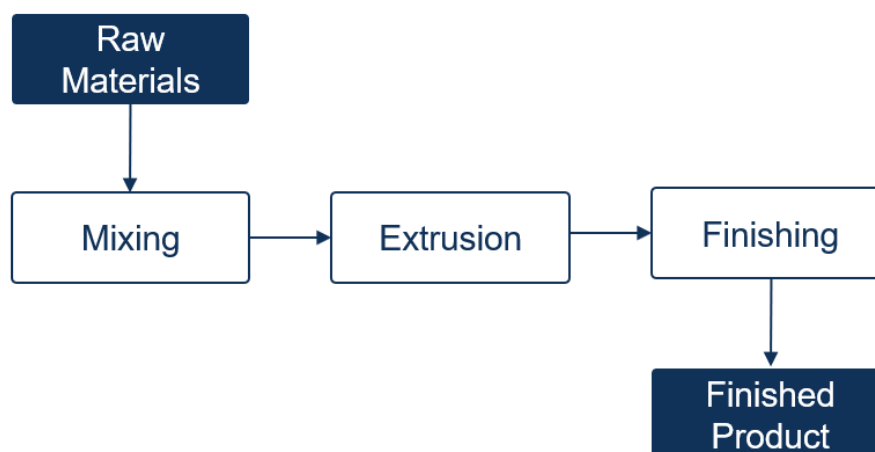
A natural fusion of aesthetics, performance and sustainability, BaseWorks™ thermoset rubber wall base delivers pure, uniform color and an attractive matte finish. Its flexibility makes installation quick, easy and affordable. Plus, it won't fade, crack or separate from the wall. BaseWorks™ is Cradle to Cradle certified.

#### Product Specification

Johnsonite BaseWorks™ Thermoset Rubber products are available in three standard heights 2.5" (6.35 cm), 4" (10.16 cm), or 6" (15.24 cm). For 2.5" and 4" heights, two lengths are available 4' (1.22 m) and 120' (36.58 m). For 6" heights, the lengths are 4' (1.22 m) or 100' (30.48 m). For the purpose of this study, the reference flow for BaseWorks™ is calculated based on the 4' length with different heights. The reference flow in LBS/m is identical across all standard sizes mentioned above.



#### Flow Diagram



# Environmental Product Declaration

Johnsonite BaseWorks™

Thermoset Rubber Wall Base



---

## 1.3. Application

Wall border to connect the space between the wall and the floor.

## 1.4. Properties of Declared Product as Delivered

Available in three standard heights 2.5" (6.35 cm), 4" (10.16 cm), or 6" (15.24 cm).

## 1.5. Material Composition

100% Thermoset rubber. No substances required to be reported as hazardous are associated with the production of this product.

## 1.6. Manufacturing

BaseWorks™ has a single layer, homogeneous composition of rubber, additives and colorants. It is produced in several stages beginning with the mixing of the raw materials. After homogeneous mixing, the resulting compound is extruded and vulcanized, cut into lengths, stacked or rolled and packaged. Scrap produced during manufacturing is collected and sent to a third party for electricity generation or beneficial reuse. Electricity, natural gas, water and propane for manufacturing were collected and allocated to the product. The upstream burdens for energy production take into consideration the geographic location of manufacturing. Tarkett has renewable energy investment and all facilities in Ohio use 100% renewable energy (wind).

## 1.7. Packaging

Carton box with 50% recycled content.

## 1.8. Transportation

Product delivery is not included within system boundaries for Tarkett's wall base products.

## 1.9. Product Installation

Installation is not included within system boundaries for Tarkett's wall base products.

## 1.10. Health Safety and Environmental Aspects

BaseWorks™ products are certified in the FloorScore® Indoor Air Quality program and comply with the VOC emissions requirements of the California Department of Public Health (CDPH) Standard Method for the Testing and Evaluation of the Volatile Organic Chemical Emissions for Indoor Sources Using Environmental Chambers, v1.1, Feb 2010 (also known as the California 01350 Specification). Tarkett's recommended installation instructions should be followed and the appropriate adhesive Material Safety Data Sheets (MSDSs) referenced.

## 1.11. Reference Service Life and Estimated Building Service Life

Wall base product is assumed to have a reference service life of 35 years.

## 1.12. Disposal

Product End of Life is not included within system boundaries for Tarkett's wall base products.

## 1.13. Reuse, Recycling, and Energy Recovery

Product End of Life is not included within system boundaries for Tarkett's wall base products.

# Environmental Product Declaration

Johnsonite BaseWorks™

Thermoset Rubber Wall Base



---

## Life Cycle Assessment Background Information

---

### 2.1. Functional or Declared Unit

For wall base products, the declared unit is 1 m of installed wall base product. All flows to and from the environment within the system boundary are normalized to one pound of product output, which is then multiplied by the actual product weight per linear meter.

### 2.2. System Boundary

The system boundaries of the study are split into modules according to the requirements of the PCR, consistent with ISO 21930. The life cycle phases considered within system boundaries include:

- Extraction and processing of raw materials (A1)
- Inbound transportation (A2)
- Manufacturing (A3)

### 2.3. Limitations

The findings in the study are limited by the inherent uncertainty of creating a representative model through LCA, but efforts were made to reduce uncertainty by examining 100% of the materials that make up the product. With the current availability of data, it is nearly impossible to follow the entire supply chain associated with the product in a company-specific way. Many of the processes within the supply chains are modeled using average industry data with varying amounts of specificity. This makes it difficult to accurately determine how well the unit process data represents the actual factors in the products' life cycle.

### 2.4. Cut-off Criteria

While the PCR allows for any mass flow to be omitted if it is less than 1%, with cumulative flows not exceeding 5%, this study includes 100% of the material flows and thus follows the cut-off criteria. No known flows are deliberately excluded from this EPD.

### 2.5. Data Sources

The quality of the results of an LCA study is directly dependent on the quality of input data used in the inventory for modeling. In this study, data was collected from multiple sources and primary data was used when available. Data on material composition and manufacturing are primary data from Tarkett and are based on year 2020. All upstream and downstream activities are included using a combination of primary and secondary data. While the majority of inventory data are sourced from primary resources, representative proxies are used to close gaps in the absence of primary data.

### 2.6. Data Quality

Primary and secondary data are represented ecoinvent v3.8 and DATASMART LCI Package (Long Trail Sustainability, 2021)). Ecoinvent v3.8 is used as the main database for background data. This version is published in 2021. 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.

### 2.7. Period under Review

Primary data collected from Tarkett are based on averaged 2020 annual data for production details (energy, water, and emissions). Raw material inputs were based on standard product weight and formulation.

# Environmental Product Declaration

Johnsonite BaseWorks™

Thermoset Rubber Wall Base



## 2.8. Allocation

Given that raw materials are key contributors to environmental performance, mass-based allocation of plant utility consumption, resource use and waste generation was applied for facilities that produced more than one flooring product. Raw material inputs are allocated to 1 pound of product output based on formula.

## Life Cycle Assessment Results

The system boundaries of the study are split into modules according to the requirements of the PCR, consistent with ISO 21930. These modules include extraction and processing of raw materials (A1), inbound transportation (A2), and manufacturing (A3). No impacts from the product's construction stage, use stage, or end of life stage are included. The optional module D, for reporting benefits and loads beyond the system boundary has also been excluded. A summary of the system boundaries by module is provided below in Table 1. Modules with an 'X' are included in the study and those with an 'MND' are Module Not Declared.

Table 1. Description of the system boundary modules

|     | Product Stage       |           |               | Construct-<br>ion Stage        |                  | Use Stage |             |        |             |               |  |   |                | End Of Life Stage |                  |          |   | Benefits and Loads Beyond the System<br>Boundary |
|-----|---------------------|-----------|---------------|--------------------------------|------------------|-----------|-------------|--------|-------------|---------------|--|---|----------------|-------------------|------------------|----------|---|--|
|     | A1                  | A2        | A3            | A4                             | A5               | B1        | B2          | B3     | B4          | B5            | B6   | B7  | C1             | C2                | C3               | C4       | D                                       |  |
|     | Raw Material Supply | Transport | Manufacturing | Transport From Gate<br>to Site | Assembly/Install | Use       | Maintenance | Repair | Replacement | Refurbishment | Building Operational<br>Energy Use During<br>Product Use | Building Operational<br>Water Use During<br>Product Use | Deconstruction | Transport         | Waste Processing | Disposal | Reuse, Recovery,<br>Recycling Potential |  |
| EPD | X                   | X         | X             | MND                            | MND              | MND       | MND         | MND    | MND         | MND           | MND  | MND   | MND            | MND               | MND              | MND      | MND                                     | MND  |

# Environmental Product Declaration

Johnsonite BaseWorks™

Thermoset Rubber Wall Base



## 3.1 Life Cycle Impact Assessment Results – With Renewable Energy Credits

Table 2. North American Impact Assessment Results for 2.5" (6.35cm) height – with RECs

| TRACI v2.1  | UNIT         | TOTAL    | A1       | A2       | A3       |
|---|--------------|----------|----------|----------|----------|
| Global Warming Potential (GWP 100)  | kg CO2 eq    | 6.52E-01 | 4.13E-01 | 9.01E-02 | 1.49E-01 |
| Ozone Depletion Potential (ODP)   | kg CFC-11 eq | 1.01E-07 | 6.15E-08 | 2.13E-08 | 1.81E-08 |
| Smog Formation Potential (SFP)  | kg O3 eq     | 6.95E-02 | 4.73E-02 | 1.69E-02 | 5.38E-03 |
| Acidification (AP)  | kg SO2 eq    | 3.86E-03 | 2.91E-03 | 6.74E-04 | 2.78E-04 |
| Eutrophication Potential (EP)   | kg N eq      | 1.04E-03 | 8.41E-04 | 1.10E-04 | 8.51E-05 |
| Abiotic Resource Depletion Potential of Non-renewable energy resources (ADP <sub>fossil</sub> ) | MJ, LHV      | 2.05E+00 | 1.50E+00 | 1.90E-01 | 3.65E-01 |

Table 3. North American Impact Assessment Results for 4" (10.16cm) height – with RECs

| TRACI v2.1  | UNIT         | TOTAL    | A1       | A2       | A3       |
|---|--------------|----------|----------|----------|----------|
| Global Warming Potential (GWP 100)  | kg CO2 eq    | 9.45E-01 | 5.87E-01 | 1.35E-01 | 2.23E-01 |
| Ozone Depletion Potential (ODP)   | kg CFC-11 eq | 1.48E-07 | 8.93E-08 | 3.18E-08 | 2.70E-08 |
| Smog Formation Potential (SFP)  | kg O3 eq     | 1.02E-01 | 6.88E-02 | 2.52E-02 | 8.03E-03 |
| Acidification (AP)  | kg SO2 eq    | 5.65E-03 | 4.23E-03 | 1.01E-03 | 4.15E-04 |
| Eutrophication Potential (EP)   | kg N eq      | 1.38E-03 | 1.09E-03 | 1.64E-04 | 1.27E-04 |
| Abiotic Resource Depletion Potential of Non-renewable energy resources (ADP <sub>fossil</sub> ) | MJ, LHV      | 3.02E+00 | 2.19E+00 | 2.84E-01 | 5.45E-01 |

Table 4. North American Impact Assessment Results for 6" (15.24cm) height – with RECs

| TRACI v2.1  | UNIT         | TOTAL    | A1       | A2       | A3       |
|---|--------------|----------|----------|----------|----------|
| Global Warming Potential (GWP 100)  | kg CO2 eq    | 1.11E+00 | 7.04E-01 | 1.54E-01 | 2.54E-01 |
| Ozone Depletion Potential (ODP)   | kg CFC-11 eq | 1.72E-07 | 1.05E-07 | 3.63E-08 | 3.08E-08 |
| Smog Formation Potential (SFP)  | kg O3 eq     | 1.19E-01 | 8.06E-02 | 2.88E-02 | 9.17E-03 |
| Acidification (AP)  | kg SO2 eq    | 6.59E-03 | 4.96E-03 | 1.15E-03 | 4.74E-04 |
| Eutrophication Potential (EP)   | kg N eq      | 1.77E-03 | 1.43E-03 | 1.87E-04 | 1.45E-04 |
| Abiotic Resource Depletion Potential of Non-renewable energy resources (ADP <sub>fossil</sub> ) | MJ, LHV      | 3.50E+00 | 2.55E+00 | 3.24E-01 | 6.22E-01 |

# Environmental Product Declaration

Johnsonite BaseWorks™

Thermoset Rubber Wall Base



## 3.2 Life Cycle Inventory Results – With Renewable Energy Credits

Table 5. Resource Use for 2.5" (6.35cm) height – with RECs

| Parameter  | UNIT    | TOTAL    | A1       | A2       | A3       |
|--|---------|----------|----------|----------|----------|
| Renewable primary energy as energy carrier (RPRE)            | MJ, LHV | 1.73E+00 | 3.94E-01 | 1.51E-02 | 1.32E+00 |
| Renewable primary energy as material utilization (RPRM)      | MJ, LHV | 0.00E+00 | x        | x        | x        |
| Total use of renewable primary energy resources (RPRT)       | MJ      | 1.73E+00 | 3.94E-01 | 1.51E-02 | 1.32E+00 |
| Non-renewable primary energy as energy carrier (NRPRE)       | MJ      | 1.17E+01 | 7.99E+00 | 1.34E+00 | 2.33E+00 |
| Non-renewable primary energy as material utilization (NRPRM) | MJ      | 2.74E+00 | 2.74E+00 | x        | x        |
| Total use of non-renewable primary energy resources (NRPRT)  | MJ      | 1.44E+01 | 1.07E+01 | 1.34E+00 | 2.33E+00 |
| Use of secondary materials (SM)                              | kg      | 0.00E+00 | x        | x        | x        |
| Renewable secondary fuels (RSF)                              | MJ      | 0.00E+00 | x        | x        | x        |
| Use of non-renewable secondary fuels (NRSF)                  | MJ      | 0.00E+00 | x        | x        | x        |
| Recovered energy (RE)  | MJ      | 0.00E+00 | x        | x        | x        |
| Use of net fresh water (FW)                                  | m³      | 4.12E-03 | 2.54E-03 | 1.45E-04 | 1.44E-03 |

Table 6. Resource Use for 4" (10.16cm) height – with RECs

| Parameter  | UNIT    | TOTAL    | A1       | A2       | A3       |
|--|---------|----------|----------|----------|----------|
| Renewable primary energy as energy carrier (RPRE)            | MJ, LHV | 2.50E+00 | 5.71E-01 | 2.18E-02 | 1.91E+00 |
| Renewable primary energy as material utilization (RPRM)      | MJ, LHV | 0.00E+00 | x        | x        | x        |
| Total use of renewable primary energy resources (RPRT)       | MJ      | 2.50E+00 | 5.71E-01 | 2.18E-02 | 1.91E+00 |
| Non-renewable primary energy as energy carrier (NRPRE)       | MJ      | 1.69E+01 | 1.16E+01 | 1.95E+00 | 3.37E+00 |
| Non-renewable primary energy as material utilization (NRPRM) | MJ      | 3.97E+00 | 3.97E+00 | x        | x        |
| Total use of non-renewable primary energy resources (NRPRT)  | MJ      | 2.09E+01 | 1.55E+01 | 1.95E+00 | 3.37E+00 |
| Use of secondary materials (SM)                              | kg      | 0.00E+00 | x        | x        | x        |
| Renewable secondary fuels (RSF)                              | MJ      | 0.00E+00 | x        | x        | x        |
| Use of non-renewable secondary fuels (NRSF)                  | MJ      | 0.00E+00 | x        | x        | x        |
| Recovered energy (RE)  | MJ      | 0.00E+00 | x        | x        | x        |
| Use of net fresh water (FW)                                  | m³      | 5.97E-03 | 3.68E-03 | 2.11E-04 | 2.08E-03 |



# Environmental Product Declaration

Johnsonite BaseWorks™

Thermoset Rubber Wall Base



**Table 7. Resource Use for 6" (15.24cm) height – with RECs**

| Parameter  | UNIT    | TOTAL    | A1       | A2       | A3       |
|--|---------|----------|----------|----------|----------|
| Renewable primary energy as energy carrier (RPRE)            | MJ, LHV | 2.95E+00 | 6.73E-01 | 2.57E-02 | 2.25E+00 |
| Renewable primary energy as material utilization (RPRM)      | MJ, LHV | 0.00E+00 | x        | x        | x        |
| Total use of renewable primary energy resources (RPRT)       | MJ      | 2.95E+00 | 6.73E-01 | 2.57E-02 | 2.25E+00 |
| Non-renewable primary energy as energy carrier (NRPRE)       | MJ      | 1.99E+01 | 1.36E+01 | 2.29E+00 | 3.97E+00 |
| Non-renewable primary energy as material utilization (NRPRM) | MJ      | 4.67E+00 | 4.67E+00 | x        | x        |
| Total use of non-renewable primary energy resources (NRPRT)  | MJ      | 2.46E+01 | 1.83E+01 | 2.29E+00 | 3.97E+00 |
| Use of secondary materials (SM)                              | kg      | 0.00E+00 | x        | x        | x        |
| Renewable secondary fuels (RSF)                              | MJ      | 0.00E+00 | x        | x        | x        |
| Use of non-renewable secondary fuels (NRSF)                  | MJ      | 0.00E+00 | x        | x        | x        |
| Recovered energy (RE)  | MJ      | 0.00E+00 | x        | x        | x        |
| Use of net fresh water (FW)                                  | m³      | 7.03E-03 | 4.34E-03 | 2.48E-04 | 2.45E-03 |

**Table 8. Output Flows and Waste Categories for 2.5" (6.35cm) height – with RECs**

| Parameter  | UNIT    | TOTAL    | A1 | A2 | A3       |
|--|---------|----------|----|----|----------|
| Hazardous waste disposed (HWD)                               | kg      | 0.00E+00 | x  | x  | x        |
| Non-hazardous waste disposed (NHWD)                          | kg      | 0.00E+00 | x  | x  | x        |
| High Level Radioactive waste disposed (HRWD)                 | kg      | 0.00E+00 | x  | x  | x        |
| Low and Intermediate Level Radioactive waste disposed (LRWD) | kg      | 0.00E+00 | x  | x  | x        |
| Components for re-use (CRU)                                  | kg      | 3.29E-02 | x  | x  | 3.29E-02 |
| Materials for recycling (MR)                                 | kg      | 0.00E+00 | x  | x  | x        |
| Materials for energy recovery (MER)                          | kg      | 2.47E-02 | x  | x  | 2.47E-02 |
| Exported electrical energy (EE, electrical)                  | MJ, LHV | 0.00E+00 | x  | x  | x        |
| Exported thermal energy (EE, thermal)                        | MJ, LHV | 0.00E+00 | x  | x  | x        |

# Environmental Product Declaration

Johnsonite BaseWorks™

Thermoset Rubber Wall Base



Table 9. Output Flows and Waste Categories for 4" (10.16cm) height – with RECs

| Parameter  | UNIT    | TOTAL    | A1 | A2 | A3       |
|--|---------|----------|----|----|----------|
| Hazardous waste disposed (HWD)                               | kg      | 0.00E+00 | x  | x  | x        |
| Non-hazardous waste disposed (NHWD)                          | kg      | 0.00E+00 | x  | x  | x        |
| High Level Radioactive waste disposed (HRWD)                 | kg      | 0.00E+00 | x  | x  | x        |
| Low and Intermediate Level Radioactive waste disposed (LRWD) | kg      | 0.00E+00 | x  | x  | x        |
| Components for re-use (CRU)                                  | kg      | 4.77E-02 | x  | x  | 4.77E-02 |
| Materials for recycling (MR)                                 | kg      | 0.00E+00 | x  | x  | x        |
| Materials for energy recovery (MER)                          | kg      | 3.58E-02 | x  | x  | 3.58E-02 |
| Exported electrical energy (EE, electrical)                  | MJ, LHV | 0.00E+00 | x  | x  | x        |
| Exported thermal energy (EE, thermal)                        | MJ, LHV | 0.00E+00 | x  | x  | x        |

Table 10. Output Flows and Waste Categories for 6" (15.24cm) height – with RECs

| Parameter  | UNIT    | TOTAL    | A1 | A2 | A3       |
|--|---------|----------|----|----|----------|
| Hazardous waste disposed (HWD)                               | kg      | 0.00E+00 | x  | x  | x        |
| Non-hazardous waste disposed (NHWD)                          | kg      | 0.00E+00 | x  | x  | x        |
| High Level Radioactive waste disposed (HRWD)                 | kg      | 0.00E+00 | x  | x  | x        |
| Low and Intermediate Level Radioactive waste disposed (LRWD) | kg      | 0.00E+00 | x  | x  | x        |
| Components for re-use (CRU)                                  | kg      | 5.61E-02 | x  | x  | 5.61E-02 |
| Materials for recycling (MR)                                 | kg      | 0.00E+00 | x  | x  | x        |
| Materials for energy recovery (MER)                          | kg      | 4.21E-02 | x  | x  | 4.21E-02 |
| Exported electrical energy (EE, electrical)                  | MJ, LHV | 0.00E+00 | x  | x  | x        |
| Exported thermal energy (EE, thermal)                        | MJ, LHV | 0.00E+00 | x  | x  | x        |

# Environmental Product Declaration

Johnsonite BaseWorks™

Thermoset Rubber Wall Base



Table 11. Carbon Emissions and Removals for 2.5" (6.35cm) height – with RECs

| Parameter                                      | UNIT   | TOTAL     | A1       | A2       | A3        |
|--|--------|-----------|----------|----------|-----------|
| Biogenic Carbon Removal from Product (BCRP)    | kg CO2 | 0.00E+00  | 0.00E+00 | 0.00E+00 | 0.00E+00  |
| Biogenic Carbon Emission from Product (BCEP)   | kg CO2 | 0.00E+00  | 0.00E+00 | 0.00E+00 | 0.00E+00  |
| Biogenic Carbon Removal from Packaging (BCRK)  | kg CO2 | -9.17E-02 | 0.00E+00 | 0.00E+00 | -9.17E-02 |
| Biogenic Carbon Emission from Packaging (BCEK) | kg CO2 | 0.00E+00  | 0.00E+00 | 0.00E+00 | 0.00E+00  |

Table 12. Carbon Emissions and Removals for 4" (10.16cm) height – with RECs

| Parameter                                      | UNIT   | TOTAL     | A1       | A2       | A3        |
|--|--------|-----------|----------|----------|-----------|
| Biogenic Carbon Removal from Product (BCRP)    | kg CO2 | 0.00E+00  | 0.00E+00 | 0.00E+00 | 0.00E+00  |
| Biogenic Carbon Emission from Product (BCEP)   | kg CO2 | 0.00E+00  | 0.00E+00 | 0.00E+00 | 0.00E+00  |
| Biogenic Carbon Removal from Packaging (BCRK)  | kg CO2 | -9.17E-02 | 0.00E+00 | 0.00E+00 | -9.17E-02 |
| Biogenic Carbon Emission from Packaging (BCEK) | kg CO2 | 0.00E+00  | 0.00E+00 | 0.00E+00 | 0.00E+00  |

Table 13. Carbon Emissions and Removals for 6" (15.24cm) height – with RECs

| Parameter                                      | UNIT   | TOTAL     | A1       | A2       | A3        |
|--|--------|-----------|----------|----------|-----------|
| Biogenic Carbon Removal from Product (BCRP)    | kg CO2 | 0.00E+00  | 0.00E+00 | 0.00E+00 | 0.00E+00  |
| Biogenic Carbon Emission from Product (BCEP)   | kg CO2 | 0.00E+00  | 0.00E+00 | 0.00E+00 | 0.00E+00  |
| Biogenic Carbon Removal from Packaging (BCRK)  | kg CO2 | -9.17E-02 | 0.00E+00 | 0.00E+00 | -9.17E-02 |
| Biogenic Carbon Emission from Packaging (BCEK) | kg CO2 | 0.00E+00  | 0.00E+00 | 0.00E+00 | 0.00E+00  |

# Environmental Product Declaration

Johnsonite BaseWorks™

Thermoset Rubber Wall Base



## 3.3 Life Cycle Impact Assessment Results – Without Renewable Energy Credits

Table 14. North American Impact Assessment Results for 2.5" (6.35cm) height – without RECs

| TRACI v2.1  | UNIT         | TOTAL    | A1       | A2       | A3       |
|---|--------------|----------|----------|----------|----------|
| Global Warming Potential (GWP 100)  | kg CO2 eq    | 9.16E-01 | 4.13E-01 | 9.01E-02 | 4.13E-01 |
| Ozone Depletion Potential (ODP)   | kg CFC-11 eq | 1.09E-07 | 6.15E-08 | 2.13E-08 | 2.65E-08 |
| Smog Formation Potential (SFP)  | kg O3 eq     | 7.97E-02 | 4.73E-02 | 1.69E-02 | 1.55E-02 |
| Acidification (AP)  | kg SO2 eq    | 5.05E-03 | 2.91E-03 | 6.74E-04 | 1.47E-03 |
| Eutrophication Potential (EP)   | kg N eq      | 1.65E-03 | 8.41E-04 | 1.10E-04 | 6.95E-04 |
| Abiotic Resource Depletion Potential of Non-renewable energy resources (ADP <sub>fossil</sub> ) | MJ, LHV      | 2.34E+00 | 1.50E+00 | 1.90E-01 | 6.56E-01 |

Table 15. North American Impact Assessment Results for 4" (10.16cm) height – without RECs

| TRACI v2.1  | UNIT         | TOTAL    | A1       | A2       | A3       |
|---|--------------|----------|----------|----------|----------|
| Global Warming Potential (GWP 100)  | kg CO2 eq    | 1.33E+00 | 5.98E-01 | 1.31E-01 | 5.99E-01 |
| Ozone Depletion Potential (ODP)   | kg CFC-11 eq | 1.58E-07 | 8.91E-08 | 3.08E-08 | 3.84E-08 |
| Smog Formation Potential (SFP)  | kg O3 eq     | 1.15E-01 | 6.85E-02 | 2.45E-02 | 2.25E-02 |
| Acidification (AP)  | kg SO2 eq    | 7.32E-03 | 4.22E-03 | 9.76E-04 | 2.12E-03 |
| Eutrophication Potential (EP)   | kg N eq      | 2.38E-03 | 1.22E-03 | 1.59E-04 | 1.01E-03 |
| Abiotic Resource Depletion Potential of Non-renewable energy resources (ADP <sub>fossil</sub> ) | MJ, LHV      | 3.39E+00 | 2.17E+00 | 2.75E-01 | 9.51E-01 |

Table 16. North American Impact Assessment Results for 6" (15.24cm) height – without RECs

| TRACI v2.1  | UNIT         | TOTAL    | A1       | A2       | A3       |
|---|--------------|----------|----------|----------|----------|
| Global Warming Potential (GWP 100)  | kg CO2 eq    | 1.56E+00 | 7.04E-01 | 1.54E-01 | 7.05E-01 |
| Ozone Depletion Potential (ODP)   | kg CFC-11 eq | 1.86E-07 | 1.05E-07 | 3.63E-08 | 4.52E-08 |
| Smog Formation Potential (SFP)  | kg O3 eq     | 1.36E-01 | 8.06E-02 | 2.88E-02 | 2.65E-02 |
| Acidification (AP)  | kg SO2 eq    | 8.61E-03 | 4.96E-03 | 1.15E-03 | 2.50E-03 |
| Eutrophication Potential (EP)   | kg N eq      | 2.81E-03 | 1.43E-03 | 1.87E-04 | 1.18E-03 |
| Abiotic Resource Depletion Potential of Non-renewable energy resources (ADP <sub>fossil</sub> ) | MJ, LHV      | 3.99E+00 | 2.55E+00 | 3.24E-01 | 1.12E+00 |

# Environmental Product Declaration

Johnsonite BaseWorks™

Thermoset Rubber Wall Base



## 3.4 Life Cycle Inventory Results – Without Renewable Energy Credits

Table 17. Resource Use for 2.5" (6.35cm) height – without RECs

| Parameter  | UNIT    | TOTAL    | A1       | A2       | A3       |
|--|---------|----------|----------|----------|----------|
| Renewable primary energy as energy carrier (RPRE)            | MJ, LHV | 4.85E-01 | 3.94E-01 | 1.51E-02 | 7.58E-02 |
| Renewable primary energy as material utilization (RPRM)      | MJ, LHV | 0.00E+00 | x        | x        | x        |
| Total use of renewable primary energy resources (RPRT)       | MJ      | 4.85E-01 | 3.94E-01 | 1.51E-02 | 7.58E-02 |
| Non-renewable primary energy as energy carrier (NRPRE)       | MJ      | 1.56E+01 | 7.99E+00 | 1.34E+00 | 6.24E+00 |
| Non-renewable primary energy as material utilization (NRPRM) | MJ      | 2.74E+00 | 2.74E+00 | x        | x        |
| Total use of non-renewable primary energy resources (NRPRT)  | MJ      | 1.83E+01 | 1.07E+01 | 1.34E+00 | 6.24E+00 |
| Use of secondary materials (SM)                              | kg      | 0.00E+00 | x        | x        | x        |
| Renewable secondary fuels (RSF)                              | MJ      | 0.00E+00 | x        | x        | x        |
| Use of non-renewable secondary fuels (NRSF)                  | MJ      | 0.00E+00 | x        | x        | x        |
| Recovered energy (RE)  | MJ      | 0.00E+00 | x        | x        | x        |
| Use of net fresh water (FW)                                  | m³      | 1.01E-02 | 2.54E-03 | 1.45E-04 | 7.42E-03 |

Table 18. Resource Use for 4" (10.16cm) height – without RECs

| Parameter  | UNIT    | TOTAL    | A1       | A2       | A3       |
|--|---------|----------|----------|----------|----------|
| Renewable primary energy as energy carrier (RPRE)            | MJ, LHV | 7.03E-01 | 5.71E-01 | 2.18E-02 | 1.10E-01 |
| Renewable primary energy as material utilization (RPRM)      | MJ, LHV | 0.00E+00 | x        | x        | x        |
| Total use of renewable primary energy resources (RPRT)       | MJ      | 7.03E-01 | 5.71E-01 | 2.18E-02 | 1.10E-01 |
| Non-renewable primary energy as energy carrier (NRPRE)       | MJ      | 2.26E+01 | 1.16E+01 | 1.95E+00 | 9.05E+00 |
| Non-renewable primary energy as material utilization (NRPRM) | MJ      | 3.97E+00 | 3.97E+00 | x        | x        |
| Total use of non-renewable primary energy resources (NRPRT)  | MJ      | 2.65E+01 | 1.55E+01 | 1.95E+00 | 9.05E+00 |
| Use of secondary materials (SM)                              | kg      | 0.00E+00 | x        | x        | x        |
| Renewable secondary fuels (RSF)                              | MJ      | 0.00E+00 | x        | x        | x        |
| Use of non-renewable secondary fuels (NRSF)                  | MJ      | 0.00E+00 | x        | x        | x        |
| Recovered energy (RE)  | MJ      | 0.00E+00 | x        | x        | x        |
| Use of net fresh water (FW)                                  | m³      | 1.46E-02 | 3.68E-03 | 2.11E-04 | 1.08E-02 |

# Environmental Product Declaration

Johnsonite BaseWorks™

Thermoset Rubber Wall Base



**Table 19. Resource Use for 6" (15.24cm) height – without RECs**

| Parameter  | UNIT    | TOTAL    | A1       | A2       | A3       |
|--|---------|----------|----------|----------|----------|
| Renewable primary energy as energy carrier (RPRE)            | MJ, LHV | 8.27E-01 | 6.73E-01 | 2.57E-02 | 1.29E-01 |
| Renewable primary energy as material utilization (RPRM)      | MJ, LHV | 0.00E+00 | x        | x        | x        |
| Total use of renewable primary energy resources (RPRT)       | MJ      | 8.27E-01 | 6.73E-01 | 2.57E-02 | 1.29E-01 |
| Non-renewable primary energy as energy carrier (NRPRE)       | MJ      | 2.66E+01 | 1.36E+01 | 2.29E+00 | 1.06E+01 |
| Non-renewable primary energy as material utilization (NRPRM) | MJ      | 4.67E+00 | 4.67E+00 | x        | x        |
| Total use of non-renewable primary energy resources (NRPRT)  | MJ      | 3.12E+01 | 1.83E+01 | 2.29E+00 | 1.06E+01 |
| Use of secondary materials (SM)                              | kg      | 0.00E+00 | x        | x        | x        |
| Renewable secondary fuels (RSF)                              | MJ      | 0.00E+00 | x        | x        | x        |
| Use of non-renewable secondary fuels (NRSF)                  | MJ      | 0.00E+00 | x        | x        | x        |
| Recovered energy (RE)  | MJ      | 0.00E+00 | x        | x        | x        |
| Use of net fresh water (FW)                                  | m³      | 1.72E-02 | 4.34E-03 | 2.48E-04 | 1.27E-02 |

**Table 20. Output Flows and Waste Categories for 2.5" (6.35cm) height – without RECs**

| Parameter  | UNIT    | TOTAL    | A1 | A2 | A3       |
|--|---------|----------|----|----|----------|
| Hazardous waste disposed (HWD)                               | kg      | 0.00E+00 | x  | x  | x        |
| Non-hazardous waste disposed (NHWD)                          | kg      | 0.00E+00 | x  | x  | x        |
| High Level Radioactive waste disposed (HRWD)                 | kg      | 0.00E+00 | x  | x  | x        |
| Low and Intermediate Level Radioactive waste disposed (LRWD) | kg      | 0.00E+00 | x  | x  | x        |
| Components for re-use (CRU)                                  | kg      | 3.29E-02 | x  | x  | 3.29E-02 |
| Materials for recycling (MR)                                 | kg      | 0.00E+00 | x  | x  | x        |
| Materials for energy recovery (MER)                          | kg      | 2.47E-02 | x  | x  | 2.47E-02 |
| Exported electrical energy (EE, electrical)                  | MJ, LHV | 0.00E+00 | x  | x  | x        |
| Exported thermal energy (EE, thermal)                        | MJ, LHV | 0.00E+00 | x  | x  | x        |

# Environmental Product Declaration

Johnsonite BaseWorks™

Thermoset Rubber Wall Base



Table 21. Output Flows and Waste Categories for 4" (10.16cm) height – without RECs

| Parameter  | UNIT    | TOTAL    | A1 | A2 | A3       |
|--|---------|----------|----|----|----------|
| Hazardous waste disposed (HWD)                               | kg      | 0.00E+00 | x  | x  | x        |
| Non-hazardous waste disposed (NHWD)                          | kg      | 0.00E+00 | x  | x  | x        |
| High Level Radioactive waste disposed (HRWD)                 | kg      | 0.00E+00 | x  | x  | x        |
| Low and Intermediate Level Radioactive waste disposed (LRWD) | kg      | 0.00E+00 | x  | x  | x        |
| Components for re-use (CRU)                                  | kg      | 4.77E-02 | x  | x  | 4.77E-02 |
| Materials for recycling (MR)                                 | kg      | 0.00E+00 | x  | x  | x        |
| Materials for energy recovery (MER)                          | kg      | 3.58E-02 | x  | x  | 3.58E-02 |
| Exported electrical energy (EE, electrical)                  | MJ, LHV | 0.00E+00 | x  | x  | x        |
| Exported thermal energy (EE, thermal)                        | MJ, LHV | 0.00E+00 | x  | x  | x        |

Table 22. Output Flows and Waste Categories for 6" (15.24cm) height – without RECs

| Parameter  | UNIT    | TOTAL    | A1 | A2 | A3       |
|--|---------|----------|----|----|----------|
| Hazardous waste disposed (HWD)                               | kg      | 0.00E+00 | x  | x  | x        |
| Non-hazardous waste disposed (NHWD)                          | kg      | 0.00E+00 | x  | x  | x        |
| High Level Radioactive waste disposed (HRWD)                 | kg      | 0.00E+00 | x  | x  | x        |
| Low and Intermediate Level Radioactive waste disposed (LRWD) | kg      | 0.00E+00 | x  | x  | x        |
| Components for re-use (CRU)                                  | kg      | 5.61E-02 | x  | x  | 5.61E-02 |
| Materials for recycling (MR)                                 | kg      | 0.00E+00 | x  | x  | x        |
| Materials for energy recovery (MER)                          | kg      | 4.21E-02 | x  | x  | 4.21E-02 |
| Exported electrical energy (EE, electrical)                  | MJ, LHV | 0.00E+00 | x  | x  | x        |
| Exported thermal energy (EE, thermal)                        | MJ, LHV | 0.00E+00 | x  | x  | x        |

# Environmental Product Declaration

Johnsonite BaseWorks™

Thermoset Rubber Wall Base



Table 23. Carbon Emissions and Removals for 2.5" (6.35cm) height – without RECs

| Parameter                                      | UNIT   | TOTAL     | A1       | A2       | A3        |
|--|--------|-----------|----------|----------|-----------|
| Biogenic Carbon Removal from Product (BCRP)    | kg CO2 | 0.00E+00  | 0.00E+00 | 0.00E+00 | 0.00E+00  |
| Biogenic Carbon Emission from Product (BCEP)   | kg CO2 | 0.00E+00  | 0.00E+00 | 0.00E+00 | 0.00E+00  |
| Biogenic Carbon Removal from Packaging (BCRK)  | kg CO2 | -9.17E-02 | 0.00E+00 | 0.00E+00 | -9.17E-02 |
| Biogenic Carbon Emission from Packaging (BCEK) | kg CO2 | 0.00E+00  | 0.00E+00 | 0.00E+00 | 0.00E+00  |

Table 24. Carbon Emissions and Removals for 4" (10.16cm) height – without RECs

| Parameter                                      | UNIT   | TOTAL     | A1       | A2       | A3        |
|--|--------|-----------|----------|----------|-----------|
| Biogenic Carbon Removal from Product (BCRP)    | kg CO2 | 0.00E+00  | 0.00E+00 | 0.00E+00 | 0.00E+00  |
| Biogenic Carbon Emission from Product (BCEP)   | kg CO2 | 0.00E+00  | 0.00E+00 | 0.00E+00 | 0.00E+00  |
| Biogenic Carbon Removal from Packaging (BCRK)  | kg CO2 | -9.17E-02 | 0.00E+00 | 0.00E+00 | -9.17E-02 |
| Biogenic Carbon Emission from Packaging (BCEK) | kg CO2 | 0.00E+00  | 0.00E+00 | 0.00E+00 | 0.00E+00  |

Table 25. Carbon Emissions and Removals for 6" (15.24cm) height – without RECs

| Parameter                                      | UNIT   | TOTAL     | A1       | A2       | A3        |
|--|--------|-----------|----------|----------|-----------|
| Biogenic Carbon Removal from Product (BCRP)    | kg CO2 | 0.00E+00  | 0.00E+00 | 0.00E+00 | 0.00E+00  |
| Biogenic Carbon Emission from Product (BCEP)   | kg CO2 | 0.00E+00  | 0.00E+00 | 0.00E+00 | 0.00E+00  |
| Biogenic Carbon Removal from Packaging (BCRK)  | kg CO2 | -9.17E-02 | 0.00E+00 | 0.00E+00 | -9.17E-02 |
| Biogenic Carbon Emission from Packaging (BCEK) | kg CO2 | 0.00E+00  | 0.00E+00 | 0.00E+00 | 0.00E+00  |



# Environmental Product Declaration

Johnsonite BaseWorks™

Thermoset Rubber Wall Base



---

## LCA Interpretation

The cradle-to-gate impacts with Renewable Energy Credits are dominated by A1, Raw Material (46% to 91%), followed by A2, Upstream Transportation (6% to 25%), and A3, Manufacturing (3% to 29%).

The cradle-to-gate impacts without Renewable Energy Credits are dominated by A1, Raw Material (44% to 63%), followed by A3, Manufacturing (20% to 46%), and A2, Upstream Transportation (7% to 22%).

## Additional Information

---

### 5.1 Accreditations

- ISO 14001 Environmental Management System
- ISO 9001 Quality Management System
- ISO 45001 Occupational Health and Safety System

### 5.2 Applicable Product Standards

- ASTM F1861, 2021 Edition, April 1, 2021 - Standard Specification for Resilient Wall Base
- CSI MasterFormat Code: 09 65 13 Resilient Base and Accessories

# Environmental Product Declaration

Johnsonite BaseWorks™

Thermoset Rubber Wall Base



## References

- ACLCA. (2019). ACLCA Guidance to Calculating Non-LCIA Inventory Metrics in Accordance with ISO 21930:2017. ACLCA.
- Bare, J., Gloria, T., & Norris, G. (2006). Development of the Method and U.S. Normalization Database for Life Cycle Impact Assessment and Sustainability Metrics. Environmental Science & Technology.
- Bare, J., Norris, G., Pennington, D., & McKone, T. (2003). TRACI: The Tool for the Reduction and Assessment of Chemical and Other Environmental Impacts. Journal of Industrial Ecology.
- Frischknecht, R., Jungbluth, N., Althaus, H., Doka, G., Dones, R., Hirschier, R., . . . Nemecek, T. (2007). Implementation of Life Cycle Impact Assessment Methods: Data v2.0. Dübendorf, Switzerland: ecoinvent report No. 3, Swiss centre for Life Cycle Inventories.
- IPCC, I. P. (2013). IPCC Fifth Assessment report. The Physical Science Basis. Retrieved from <http://www.ipcc.ch/report/ar5/wg1/>.
- ISO 14025. (2006). ISO 14025:2006: Environmental labels and declarations — Type III environmental declarations — Principles and procedures. International Organization for Standardization.
- ISO 14040. (2006). ISO 14040: Environmental management -- Life cycle assessment -- Principles and framework. International Organization for Standardization.
- ISO 14044. (2006). ISO 14044:2006/Amd 1:2017/Amd 2:2020 -- Environmental management - Life cycle assessment - Requirements and guidelines. International organization for Standardization (ISO)
- ISO 21930. (2017). Sustainability in buildings and civil engineering works — Core rules for environmental product declarations of construction products and services.
- LTS. (2020). DATASMART LCI Package. Retrieved from Long Trail Sustainability: <https://ltsexperts.com/services/software/datasmart-life-cycle-inventory/>
- UL. (2018). Product Category Rules for Building Related Products and Services, Part A: Life Cycle Assessment Calculation Rules and Report Requirements UL 10010, v3.2. UL.
- UL. (2018). Product Category Rule (PCR) for Building-Related Products and Services Part B: Flooring EPD Requirements, UL Environment, (UL 10010-7, Second Edition), 2018. Manfred Russ, M. G. (2020). Evaluation of pyrolysis with LCA . BASF.
- US EPA, U. S. (2018). Facts and Figures about Materials, Waste and Recycling. Retrieved from <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/plastics-material-specific-data>
- Weidema B P, B. C. (2013). Overview and methodology. Data quality guideline for the ecoinvent database version 3. St. Gallen: The ecoinvent Centre.
- Wernet, G. B.-R. (2016). The ecoinvent database version 3 (part I): overview and methodology. The International Journal of Life Cycle Assessment, 1218–1230.

### Tarkett

30000 Aurora Rd

Solon, OH

44139 United States

**Phone** : 1-800-899-8916

[www.tarkett.com](http://www.tarkett.com)

### TrueNorth Collective

4537 Winnequah Rd,

Monona, Wisconsin

53716 United States

**Phone** : 1 608-616-5024

[info@truenorthcollective.net](mailto:info@truenorthcollective.net)

[www.truenorthcollective.net](http://www.truenorthcollective.net)

