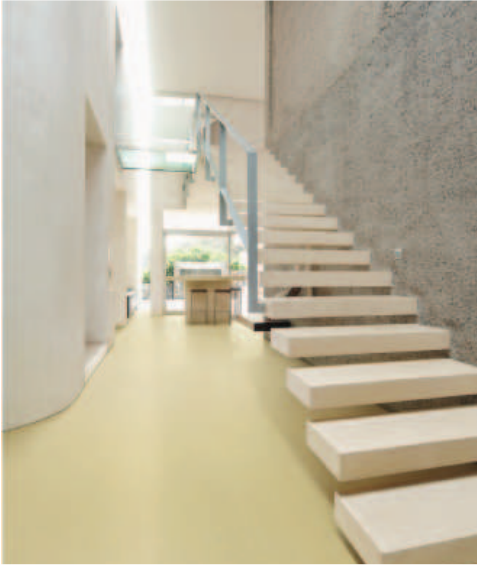




# EPD Transparency Brief

|                                    |  |
|------------------------------------|--|
| <b>COMPANY NAME</b>                | <b>Forbo Flooring System</b>   |
| <b>PRODUCT TYPE</b>                | <b>Resilient Linoleum Floor Covering</b>   |
| <b>PRODUCT NAME</b>                | <b>Marmoleum 2.0mm</b>   |
| <b>PRODUCT DEFINITION</b>          | Marmoleum is a linoleum floor covering complying with all requirements of EN-ISO 24011: Specification for plain and decorative linoleum. |
| <b>PRODUCT CATEGORY RULE (PCR)</b> | <b>PCR- Flooring</b><br>Including: Carpet, Resilient, Laminate, Ceramic, Wood (NSF 2012)   |
| <b>CERTIFICATION PERIOD</b>        | <b>November 12, 2012 - November 12, 2017</b>   |
| <b>DECLARATION NUMBER</b>          | <b>12CA64879.101.1</b>   |



## LIFECYCLE IMPACT CATEGORIES

The environmental impacts listed below were assessed throughout the product's lifecycle – including raw material extraction, transportation, manufacturing, packaging, use, and disposal at end of life.

|              | ATMOSPHERE  |  |  | WATER  |  | EARTH   |  |
|--------------|---|--|--|--|--|---|--|
|              |   |  |  |  |  |   |  |
|              | <b>Global Warming Potential</b> refers to long-term changes in global weather patterns – including temperature and precipitation – that are caused by increased concentrations of greenhouse gases in the atmosphere. | <b>Ozone Depletion Potential</b> is the destruction of the stratospheric ozone layer, which shields the earth from ultraviolet radiation that's harmful to life, caused by human-made air pollution. | <b>Photochemical Ozone Creation Potential</b> happens when sunlight reacts with hydrocarbons, nitrogen oxides, and volatile organic compounds, to produce a type of air pollution known as smog. | <b>Acidification Potential</b> is the result of human-made emissions and refers to the decrease in pH and increase in acidity of oceans, lakes, rivers, and streams – a phenomenon that pollutes groundwater and harms aquatic life. | <b>Eutrophication Potential</b> occurs when excessive nutrients cause increased algae growth in lakes, blocking the underwater penetration of sunlight needed to produce oxygen and resulting in the loss of aquatic life. | <b>Depletion of Abiotic Resources (Elements)</b> refers to the reduction of available non-renewable resources, such as metals and gases, that are found on the periodic table of elements, due to human activity. | <b>Depletion of Abiotic Resources (Fossil Fuels)</b> refers to the decreasing availability of non-renewable carbon-based compounds, such as oil and coal, due to human activity. |
| <b>TRACI</b> |   |  |  |  |  |   |  |
| <b>CML</b>   | 5.45 kg CO2 eq  | 2.59E-08 kg CFC-11 eq  | 1.82E-03 kg C2H4   | 3.93E-02 kg SO2 eq   | 9.29E-03 kg PO4 eq   | 2.87E-06 kg Sb-Equiv.   | 52.19 MJ   |

**FUNCTIONAL UNIT** The functional unit is one square meter of installed product and the use stage is considered for one year of service life.





## MATERIAL CONTENT

Material content measured to 1%.

| COMPONENT | MATERIAL               | AVAILABILITY                                 | MASS% | ORIGIN            |
|-----------|------------------------|--|-------|-------------------|
| Binder    | Linseed Oil            | Bio-based Crop                               | 19    | N. America/Europe |
| Binder    | Gum Rosin              | Bio-based Crop                               | 2     | Indonesia/China   |
| Binder    | Tall Oil               | Bio-based waste product from paper industry  | 11    | USA               |
| Filler    | Wood Flour             | Bio-based waste product from wood processing | 22    | Germany           |
| Filler    | Calcium carbonate      | Abundant Mineral                             | 24    | Germany           |
| Filler    | Reused Marmoleum       | Reused Material                              | 10    | Internal          |
| Pigment   | Titanium dioxide       | Limited Mineral                              | 2     | Global            |
| Pigment   | Various other pigments | Limited Mineral                              | 1     | Global            |
| Backing   | Jute                   | Bio-based Crop                               | 8     | India/Bangladesh  |
| Finish    | Lacquer                | Non-renewable                                | 1     | Netherlands       |
|           |                        |  |       |                   |
|           |                        |  |       |                   |

## ADDITIONAL ENVIRONMENTAL INFORMATION

|                                |                   |
|--------------------------------|-------------------|
| PRE-CONSUMER RECYCLED CONTENT  | 39 %              |
| POST-CONSUMER RECYCLED CONTENT | 0 %               |
| VOC EMISSIONS                  | CHPS 13050        |
| WATER CONSUMPTION              | 62.2 cubic meters |

## ENERGY

|                      |      |          |
|----------------------|------|----------|
| RENEWABLE ENERGY     | 49 % | 55.91 MJ |
| NON-RENEWABLE ENERGY | 51 % | 57.61 MJ |

## MANUFACTURER CONTACT INFO

|         |                        |
|---------|------------------------|
| NAME    | Forbo Flooring Systems |
| PHONE   | + 31 756 477 477       |
| EMAIL   | contact@forbo.com      |
| WEBSITE | www.forbo-flooring.nl  |

## RECYCLING OR REUSE

Marmoleum can be recycled or composted.

Check with your local Forbo business unit as it pertains to material take back or reclamation program.

## STANDARDS

ASTM F2043  
 EN-ISO 24011  
 EN 13501-1  
 EN 13893  
 EN 1815  
 EN 12524  
 ASTM E648/NFPA 258  
 ASTM E662/NFPA 258  
 CAN ULC S102.2  
 ISO 9001  
 ISO 14001  
 OHSAS 18001

## CERTIFICATIONS

