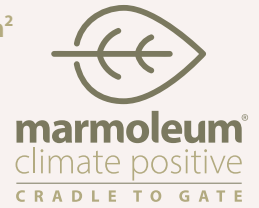
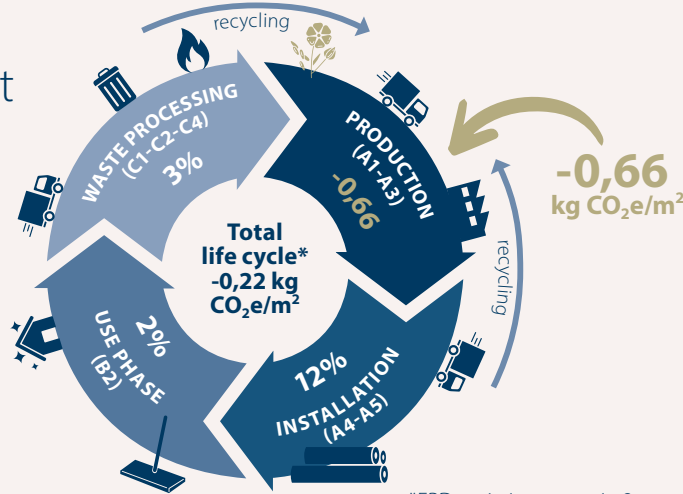


ENVIRONMENTAL TRANSPARENCY PASSPORT

Marmoleum 2.0, 2.5, 3.2 mm sheet | 1/March/2024 | EPD reference 47908599342.101.1

Forbo's 'Going Round, Moving Forward' philosophy underscores our commitment to circular economy principles, emphasizing the importance of entire product lifecycle sustainable practices. Since 2019 we have reduced scope 1 and 2 Green House Gas emissions by 36%. Since 2023 Forbo sales organisations in 13 countries have been participating in our Back-to-the-floor (BTTF) program. Forbo provides Transparency, with focus on Circularity and Renewability. Since 2012 our Sustainability Report is done according to the Global Reporting Initiative (GRI) standards. Aligned with multiple United Nations Sustainable Development Goals (SDGs).

Life cycle environmental impact Marmoleum 2.5 mm



*EPD emission scenario 2

HEALTHY, NATURAL MATERIALS

- Marmoleum is made from up to 98% natural raw materials
- Marmoleum is made from up to 78% bio-based materials (EN17861:2023)
- free of PVC, PET, synthetic rubber and plasticizers
- REACH compliant
- Excellent indoor air quality: low TVOC's $\leq 0,01 \text{ mg/m}^3$
- Compliant to C2C RSL (V4)



CLEAN AIR AND CLIMATE PROTECTION

- Every m² Marmoleum is climate positive, cradle to gate, without offsetting
- 100% renewable electricity
- Solar panels on-site
- Continuous improvement energy reduction and transition projects



CIRCULAR PRODUCT

- Reduce: Design out waste and pollution**
 - Our Back-to-the-floor program offers a proven post-consumer recycling process
 - Circular industry partnerships
- Re-use & recycle: Keep materials in use**
 - Topshield pro, extended warranty
 - Contain up to 38% recycled content
 - 65 tonnes Marmoleum recycled in BTTF 2023
- Renew: Regenerate natural systems**
 - Over half of the ingredients are derived from renewable sources



SOCIAL FAIRNESS, WATER & SOIL STEWARDSHIP

- SA8000 certification proofs Forbo's willingness to develop, maintain and apply socially acceptable practices throughout the value chain
- Producing Marmoleum does not require water
- Daily cleaning Marmoleum does not require water
- PEFC certified wood flour only
- Due diligence policy on child labour and conflict materials





GLOBAL THIRD PARTY CERTIFIED PRODUCT



Check our website for more information



Healthy natural materials	Third party verified
Product description	Marmoleum 2.0, 2.5, 3.2 mm sheet link to tech. spec sheet
All material content assures a positive impact on material quality and future circularity	Free of PVC, Free of PET, synthetic rubber, and plasticisers. REACH compliant
Low TVOC	Indoor air Gold, Eurofins AgBB compliant French Act A+ CDPH 01350 M1 certified Belgian VOC compliant
 	
Health Product Declaration	Link
Marmoleum has natural bacteriostatic properties which are confirmed by independent laboratories, even against MRSA bacteria.	

Clean air and Climate protection	
Manufacturing site	Forbo Flooring BV Assendelft
Site scope 1 & 2 Emissions (2023)*	9470 ton CO ₂

Product Carbon Footprint	Third party verified
Environmental Product Declaration	Link to online EPD
Cradle to gate (A1-A3)**	kg CO ₂ equiv. /m ²
	2.0 mm -0,26
	2.5 mm -0,66
	3.2 mm -1,67
Cradle to grave (1Y)	2.0 mm 0,11
Landfill (A1-C4)***	2.5 mm -0,22
	3.2 mm -1,09
Incineration (A1-C3)***	2.0 mm 1,63
	2.5 mm 1,71
	3.2 mm 1,50

Circular product	
Product weight	2.0 mm 2.3 kg/m ² 2.5 mm 2.9 kg/m ² 3.2 mm 3.9 kg/m ²
Total recycled content	32-38 %
Pre-consumer non-flooring recycled content	21-33 %
Flooring recycled content	up to 15%
Renewable content	59-78 %
Bio-based content	70-78 %

Harmonised by EN 17861: 2023

Social fairness, water and soil stewardship	
Site management systems certified on environmental & quality management, and occupational health and safety. To support social equity and fair treatment of workers in our supply chain we adopted the Social Accountability standard SA 8000. We have a child labor and conflict minerals due diligence policy. Our Marmoleum manufacturing process is with zero-water usage.	ISO9001, ISO14001, ISO45001 SA8000

Contribution to sustainable building schemes	
BREEAM	Marmoleum flooring contributes to the environmental and well-being scores in building rating schemes, on many criteria and therewith meets the building requirements today and in the future. From bio-based and recycled raw material usage, to low VOC's and acoustic performance to the availability of a post-consumer recycling program, HPD and EPD and GRI sustainability reporting. We provide full transparency and required information for your environmental and healthy building scope.
LEED	
DNGB	
WELL	
Australian Green building council	
Ska scheme (RICS)	Meets M12 soft floor covering criteria (Ska Offices Vs 1.2) (Ska Retail Vs 1.0)(Ska Higher Education Vs 1.0)

Composition		Marmoleum 2.0, 2.5, 3.2 mm sheet					
Component	Material	Availability			Amount % weighted average	Origin	
		CAS number	Renewable	Recycled			Non-Renewable
Binder	Linseed oil	8001-26-1	Bio-based crop			25	Europe
	Gum rosin	8050-09-7	Bio-based crop			5	Indonesia
Filler	Wood flour	-	Bio-based	Bio-based waste product from wood processing		23	Germany
	Calcium carbonate	1317-65-3			Abundant mineral	21	Germany
	Recycled Marmoleum	-	Partially bio-based	Pre- and post-consumer waste		14	Internal/External
Pigment	Titanium dioxide	13463-67-7			Limited mineral	2	Global
	Other pigments	-			Limited mineral	1	Global
Backing	Jute	-	Bio-based crop			8	India/Bangladesh
Finish	Lacquer	-				1	Netherlands
Marmoleum Cocoa top layer	Cocoa husks	-	Bio-based	Bio-based waste product from cocoa Industry		3	Netherlands

Clean energy use	100% renewable electricity
Achievements	Sustainability report 2023 What we do

Biogenic carbon content	kg CO ₂ equiv./m ²
	2.0 mm 2,28
	2.5 mm 4,13
	3.2 mm 5,73
Potential emission prevention by post-use recycling instead of incineration	2.0 mm 1,39
	2.5 mm 1,76
(-C3+A4-C2, neglecting partial A1 and A2 reduction)	3.2mm 2,36

* Total CO₂ emissions from manufacturing site operations and purchased energy
** CO₂ emissions associated with raw material extraction, transport, and manufacturing of a product
*** CO₂ emissions associated with the full lifecycle of a product

Fixation type	Glued down For bio-based installation Eurocol 616 Eurostar Green bio-based linoleum adhesive (RED Cert [®]) can be used
% residues of installation	Sheet = 6%
Product service life	25 years ⁺
Repairability	yes
Recyclability of cut-offs, post-use	Back-to-the-floor program Customer/project circularity certification available. Packaging from recycled source and/or recyclable

