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## PERPETUAL

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### 1. Recycled Content

- a. 51% Overall recycled content
- b. Yarn  
100% Polyamide
- c. Primary Backing  
Colback SMR is produced out 100% post-consumer recycled PET, originated from bottle scrap.
- d. Secondary Backing – back2back  
The waste from the tile cutting process is shredded and added to the secondary backing, giving it a 10% post-industrial recycled content.
- e. Recycled limestone in the backing  
The filler used for the production of our carpet tiles is 100% post-industrial recycled, diverted from a waste stream of the limestone mining.

### 2. Manufacturing

- a. Renewable energy  
49% of our energy consumption is electricity. The electricity that we use at modulyss is 100% 'green electricity' generated from renewable resources such as our own solar panels.
- b. Production site & process  
modulyss runs an integrated production chain: from tufting to the packaging of the finished tile.  
ISO certification  
Our production site is ISO-9001 certified (Quality Management) since 2000 and ISO-14001 certified (Environmental Management) since 2009.  
modulyss also works in accordance with ISO26000 and publishes a Corporate Social Responsibility report in line with the guidelines of the Global Reporting Initiative (GRI), the international standard for sustainability reporting, and the UN's Sustainable Development Goals (SDGs).  
Recycling raw yarns  
All the left over and waste yarns are collected and recycled into new yarns.  
Ecological Packaging  
We only use cardboard boxes that are made of 100% recycled material.
- c. Sustainability report  
Read all about our approach to the environment in our sustainability report 2016: <http://www.modulyss.com/ebook/mvo/>

### 3. Installation

- a. Adhesive  
modulyss® advises to use a solvent-free, easy release system with very low emissions.

**b. Installation waste**

In a rectangular building, installed before walls, using our installation descriptions the waste for carpet tiles is 3-4%. In comparison for broadloom the waste during installation rises till +/- 10%. More information can be found in our installation instructions.

**4. End of Life****a. Re-use**

At the end of life, after cleaning, carpet tiles can be re-used in non-critical areas, to extend the product life.

**b. Recycling**

Carpet tiles can be used as raw material for the backing of new carpet tiles in our back2back program.

**c. CARE**

Partnership modulyss®/Vanheede Environment Group in which carpet tiles are converted into secondary fuel to reduce CO<sub>2</sub> emissions significantly. The minerals are extracted from the carpet tiles and recycled into raw material for the cement production industry, which results in ± 50% recycling of our carpet tiles.

**5. Voc's & Chemical Substances**

This product fulfills the testing criteria for emissions of:

**a. DIBT (DE)**

Deutsche Institute für BauTechnik

TVOC28 < 1,0 mg/m<sup>3</sup>

This product is DIBT-certified, Abz-nummer Z-156.601-604.

**b. CRI (US and international)**

Carpet & Rug Institute

Compliant to the requirements of Green Label Plus, GLP 1101 (see LEED®, point 6.b)

**c. GUT (DE)**

Gemeinschaft Umweltfreundlicher Teppichboden

TVOC28 < 100 µg/m<sup>3</sup>

This product meets the GUT-criteria, GUT-license number F2EE2716. These criteria include VOC thresholds, odour and chemical substances.

**d. REACH (EU)**

modulyss® complies with the strict European REACH standards.

**e. Sundahus (SE)**

SundaHus Miljödata is a system of health and environmental assessment of products in the construction and real estate businesses. The core of the system is a database of substances, materials and products. B-rating.

**f. M1 (FI)**

This certificate is granted by the Building Information Foundation RTS sr. The aim of the classification is to enhance the development and the use of low-emitting building materials to create a healthy indoor environment.

**6. Environmental Product Declaration (EPD)**

An EPD is a standardized way to provide information on the environmental impact of a product during the entire life.

They include information on the environmental impact of raw material extraction and production, energy use and efficiency, content of materials and chemical substances, emissions to air, soil and water and waste generation. A product-specific EPD in accordance with the ISO14025 and EN15804, is available for this product.

The EPD-declaration-number is EPD-MOD-20170095-CBC1-EN.



## 7. Compliance to Green Building Certifications

### a. BRE Global (UK)

Building Research Establishment

This product can contribute towards credits in:

#### Hea 02 – Indoor Air Quality

To recognise and encourage a healthy internal environment through the specification and installation of appropriate ventilation, equipment and finishes.

- Use of a low-emission adhesive on installation (BN EN 13999-1:2007) can contribute to this credit.
- modulyss® carpet tiles meet the requirements of EN14041, including E1 classification for formaldehyde emissions, and can contribute to the credit for a healthy indoor air quality.

#### Hea 05 – Acoustic performance

To ensure the buildings' acoustic performance including sound insulation meet the appropriate standards for its purpose. This product is highly sound-absorbent. It reduces contact noise by 27 decibels ( $\Delta L_w$  - ISO 10140) and has an absorption coefficient of 0.20 (ISO 354).

#### MAT 1 – Life Cycle Impact

BREEAM Rating Offices

Certificate ENP 428 u, A rating – Eco point score 0.337

To recognise and encourage the use of construction materials with a low environmental impact (including embodied carbon) over the full life cycle of the building. For more information on the Green Guide to Specification visit [www.bre.co.uk/greenguide](http://www.bre.co.uk/greenguide) or [www.greenbooklive.com](http://www.greenbooklive.com)

#### MAT 5 – Designing for Robustness

To recognise and encourage adequate protection of exposed elements of the building and landscape, therefore minimising the frequency of replacement and maximising materials optimisation. This product satisfies the requirements of EN1307 classification, class 33 - LC2 for intensive use in a contract environment.

#### WST 01 – Construction Waste Management

To promote resource efficiency via the effective management and reduction of construction waste. This product can contribute to waste reduction on site. See item 3, installation, for more details. Concerns cutting waste on installation of carpet tiles.

### b. LEED (US and international)

Leadership in Energy and Environmental Design

modulyss products can contribute to the following LEED v4 credits:

MR credit: Interiors Life-Cycle Impact Reduction

MR credit: Building product disclosure and optimization - Environmental Product Declarations

MR credit: Building product disclosure and optimization - Sourcing of raw materials

MR4 Post-Industrial recycled content: 49%

MR4 Post-Consumer recycled content: 2%

MR credit: Building product disclosure and optimisation - Material ingredients

MR credit: Construction and demolition waste management

EQ credit: Low emitting materials

EQ credit: Indoor air quality assesment

EQ credit: Acoustic performance.

Products are not reviewed under LEED, LEED credit requirements cover the performance of materials in aggregate, not the performance of individual products of brands. For more information on LEED, visit [www.usgbc.org/contact](http://www.usgbc.org/contact)

### c. HQE (FR)

Haute Qualité Environnementale

In 2005 modulyss® was awarded the HQE certificate by FDES in accordance with NF P01 010. This product can contribute to seven of the 13 HQE targets as follows:



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Eco-Construction	MOQUETTES FDES
Integrated choice of products and construction materials	T2
Low site nuisance	T3
Comfort	MOQUETTES FDES
Hygrothermal comfort	T8
Acoustic comfort	T9
Visual comfort	T10
No unpleasant smells	T11
Health	MOQUETTES FDES
Sanitary quality of areas	T12
Sanitary air quality	T13

d. **Good Environmental Choice Australia (GECA) (AU)**

Australia's only independent, not-for-profit, multi-sector ecolabelling program. Certification program that assesses and certifies products and services that have a lower impact on the environment and human health and address important social considerations.

## 8. Health & Comfort

a. **Solvent-free Bitume**

For the bitumebacking we only use bitumen that is not oxidized and is solvent-free.

b. **No heavy metals**

modulyss® carpet tiles are free of heavy metals and other harmful substances, such as lead, mercury or chromium.

c. **Odour**

modulyss® carpet tiles are free from odours (see GUT certification program)

d. **Acoustics**

This product is strongly sound absorbent. It reduces the contact noise by 27 decibels ( $\Delta L_w$  - ISO10140), with a perfect acoustic effect as result.