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# FIRST DEFINE

## 1. Recycled Content

- a. 50% Overall recycled content
- b. Yarn

100% PA6 Solution Dyed Nylon

#### c. 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.

#### d. 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.



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# 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<sup>®</sup>/Vanheede Environment Group in which carpet tiles are converted into secondary fuel to reduce  $CO_2$  emissions significantly. The minerals are extracted from the carpet tiles and recycled into raw material for the cement production industry, which results in  $\pm$  50% recycling of our carpet tiles.

# 5. Voc's & Chemical Substances

This product fulfills the testing criteria for emissions of:

- a. CRI (US and international)
  Carpet & Rug Institute
  Compliant to the requirements of Green Label Plus, GLP 1100 (see LEED<sup>®</sup>, point 6.b)
- b. GUT (DE)

Gemeinschaft Umwelfreundlicher Teppichboden

TVOC28<100 µg/m<sup>3</sup>

This product meets the GUT-criteria, GUT-license number is in request. These criteria include VOC tresholds, odour and chemical substances.

c. REACH (EU)

modulyss<sup>®</sup> complies with the strict European REACH standards.

# 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-20170077-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 25 decibels ( $\Delta L_w$  - ISO 10140) and has an absorption coefficient of 0.15 (ISO 354).



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## MAT 1 – Life Cycle Impact

First Define has a valid Environmental Product Declaration (EPD) compliant with ISO14025 and EN15804. See paragraph EPD for more details.

#### 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 - LC1 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: 50% MR4 Post-Consumer recycled content: 0%
- 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

#### 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 eight of the 13 HQE targets as follows:

Eco-Construction	MOQUETTES FDES
Integrated choice of products and construction materials	T2
Low site nuisance	Т3
Comfort	MOQUETTES FDES
Hygrothermal comfort	T8
Acoustic comfort	Т9
Visual comfort	T10
No unpleasant smells	T11
Health	MOQUETTES FDES
Sanitary quality of areas	T12
Sanitary air quality	T13



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# 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 25 decibels ( $\Delta L_w$  - ISO 10140), with a perfect acoustic effect as result.



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