

Contribution to LEED® regulation credits

Pag. 1 / 4

Realstone slate

03/10/2018

In full compliance with its eco-aware industrial policy, Marazzi Group with sole shareholder has taken a new opportunity for eco-sustainable development offered by the LEED certification (Leadership in Energy and Environmental Design).

With their high environmental performance, Marazzi tiles allow designers to achieve the scores buildings require to obtain LEED certification.

In particular, Marazzi products achieve credits in the following areas:

- ✓ Materials and resources (MR)
- ✓ Sustainable site (SS)
- ✓ Indoor Environmental Quality (EQ)



Marazzi Group S.r.l is a member of the Green Building Council Italia, an association that promotes sustainable, energy efficient and environmentally friendly building, helping to improve people's quality of life with the LEED® standards and certification.

Credit MR
**Sourcing of Raw Materials
RECYCLED MATERIAL CONTENT**
(up to 1 LEED point)

Marazzi Group uses partly recycled materials in the production of several porcelain stoneware ranges. The recycled material comes from:

- *purchased raw materials*, which contain a given quantity of recycled material
- *recycled processing materials* (raw terracotta, water and processing sludge) from external companies

The content recycled material in Marazzi finished product is equal to:

% pre-consumer	% post-consumer	Product
12%	0%	Size 50x100_sp20mm - 80x80_sp20mm
17%	0%	Size 75x150 - 75x75 - 60x60 - 30x60

Contribution to LEED® regulation credits

Pag. 2 / 4

Realstone slate

03/10/2018

Credit MR	Material Ingredients MATERIAL INGREDIENT REPORTING	(up to 2 LEED points)
-----------	---	-----------------------

At request we will give the ingredient report about the product of interest.

Credit MR	Material Ingredients MATERIAL INGREDIENT OPTIMIZATION	(up to 2 LEED points)
-----------	--	-----------------------

Marazzi tiles **don't contain ingredients** identified in the REACH Regulation as substances of **Very High Concern** listed on the REACH Authorization or Candidate List.

Credit MR	Sourcing of Raw Materials REGIONAL MATERIALS	(doubling of the product % value)
-----------	---	--------------------------------------

Marazzi tiles are made from recycled processing materials and raw materials from companies and quarries within a 100 miles radius (160 km) of the production site.

At your request, we will calculate the specific percentage of regional materials depending on the distance between your project site and Marazzi Group plant.

Credit MR	Sourcing of Raw Materials RAW MATERIAL SOURCE AND EXTRACTION REPORTING	(up to 1 LEED point)
-----------	---	-------------------------

Raw materials used in Marazzi tiles manufacturing are harvested in quarries with an ecologically responsible management. As certified from the **EU-ECOLABEL** mark Marazzi Group requires to its suppliers a report with:

- the map indicating the location of the quarry
- the authorization for the extraction activity
- the environmental recovery plan and/or environmental impact assessment report
- the declaration of conformity to Council Directive 92/43/EEC (habitats) and Council Directive 79/409/EEC (birds) or for areas outside the EU Community the compliance with the UN conservation on biological diversity (1992)



Contribution to LEED® regulation credits

Pag. 3 / 4

Realstone slate

03/10/2018

These reports have been verified from the independent authority that releases the EU-Ecolabel mark.

Credit MR
**Building Product Disclosure and Optimization
ENVIRONMENTAL PRODUCT DECLARATION**
(up to 2 LEED points)

Marazzi Group has evaluated the life-cycle impacts of its products from cradle to grave:

1. Environmental product declaration (EPD):

- in **product-specific type III EPD** with third-party certification (Institut Bauen und Umwelt e.V.)
- in **industry-wide type III EPD** "Confindustria Ceramica" for Italian ceramic tiles with third-party certification (Institut Bauen und Umwelt e.V.)


2. Multi-attribute optimization: with **EU-ECOLABEL**, third-party certified mark assigned to products with impact reduction below industry average in the following categories:


- ✓ global warming potential (GWP) in CO₂
- ✓ depletion of the stratospheric ozone layer (ODP) in kg CFC-11
- ✓ acidification of land and water sources (AP) in moles H⁺ or kg SO₂
- ✓ eutrophication (EP) in kg nitrogen or kg phosphate

Credit MR
**CONSTRUCTION AND DEMOLITION WASTE
MANAGEMENT**
(up to 2 LEED points)

Tiles been left after the installation and their scraps produced by cutting are inert wastes, not environmentally hazardous and so **disposed for recovery**. They have to be recovered with the European Waste Code 170103 (only tiles) or 170107 (aggregated with other building material from demolition) to be reused as substrate material for roadways, clean fill material in land reclamations, recycled material in bricks manufacturing.

The packaging materials of Marazzi tiles have to be recovered with the code 150101 (paper and cardboard), 170201 (wood), 170203 (plastic).

Credit SS
HEAT ISLAND REDUCTION
(up to 2 LEED points)

Contribution to LEED® regulation credits

Pag. 4 / 4

Realstone slate

03/10/2018

To assess the contribution of ceramic tiles to buildings with less impact on the microclimate and the habitat, Marazzi Group carries out tests to define the solar reflectance index (SRI) of its roofing products and the solar reflectance value (SR) for its external flooring products.

At your request, we will test and calculate the specific SRI of Marazzi products of your interest.

Credit EQ	LOW-EMITTING MATERIALS	(up to 3 LEED points)
------------------	-------------------------------	------------------------------

The use of ceramic tiles in internal areas of buildings helps reduce the presence of air contaminants which compromise the comfort and wellbeing of installation staff, occupants and the environment.

Marazzi ceramic tiles **do not give off VOC** (volatile organic substances) as they are mineral-based finish flooring products without integral organic-based coatings and sealants.

As set by LEED, **they qualify for credit without any testing requirements.**

Marazzi tiles have been tested for compliance with **GREENGUARD** and **GREENGUARD GOLD** certification program. The list of products certified is available at site:



<https://spot.ulprospector.com/en/na/BuiltEnvironment/search?k=marazzi+group&st=1>