

# Ceramics of Italy Green Card

**1 Adaptable:** Italian tile is a high quality industrial product that is suitable for a wide range of applications: from furniture & accessories to urban planning, outdoor or indoor, in the private sector as well in the public one. Thanks to its modular approach and an amazing offering of shapes, colors and finishes, tile lends itself to creative and personalized installations. At the same time, tile has minimal damage costs (it can be spot-repaired) and is often marketed in 'families' of coordinated products – allowing for easy updates to an existing building/room.

**2 Clean:** Maintenance is simple. Often, warm water and neutral cleaners are the only cleaning products required. Additionally, tiles are inert and do not release any substance; therefore they do not increase the level of toxicity of cleaning products that, after use, are flushed into the ecosystem such as chemicals, and solvents. This easy maintenance contributes to consumer cost savings over the life of the installation. Ceramic tile is a hygienic product that is suitable to be used even in a sterile environment.

**3 Cost-efficient:** Tile can be installed in a building to function as a heat sink. When the sun hits the tile, it absorbs the thermal energy and exhausts it over time, thus acting like a natural heater and reducing heating costs.

**4 Durable:** A product's lifespan is an important factor to consider. Floor finishes such as carpet, sheet vinyl and natural hardwood have an expected life cycle of six years, 10 years and 15 years respectively, while the expected life cycle of porcelain, ceramic and mosaic tile is 50 years.

*-TCNA Study of Floor Covering Costs, 2006*

**5 Energy-saving:** Compared to other materials, porcelain tile offers excellent performance for under-floor heating systems because it allows the whole system to function effectively with a lower water temperature, thus saving energy throughout the system. Additionally, Italian manufacturers produce ceramic products suitable for ventilated wall facades. Large format tiles are one of the best options for this cladding system as they are mechanically strong and physically resilient to most of the hardships that deteriorate exterior walls. A study conducted by NASA concluded that a building with this system is up to 35% more energy efficient. The triple bottom line benefits of this value system include:

- *Planet:* Reduced Energy Consumption; Reduced CO2 Emission; Reduced Resource Consumption; Long Lasting Solution.
- *People:* Better Air Quality; Greener Building (Contributes to LEED Commercial and Residential Standards); Lower CO2 Footprint.
- *Profit:* Reduced Energy Bills; Longer Life Cycle; Increased Productivity; Reduced Liability.

*- Paul Shahriari, Founder GreenMind*

**6 Non-toxic:** Ceramic tiles contain no VOCs (Volatile Organic Compounds) that release gas prior to, during, or after installation. Products that meet stringent VOC restrictions contribute to LEED (Leadership in Energy and Environmental Design) credits for a project. In addition, tiles will not absorb odors from smoke, paint fumes or other contaminants, enhancing indoor air quality. Grout and adhesives, produced by leading Italian manufacturers, offer products that are solvent-free, nonflammable, extremely low-TVOC and low-odor.

**7 Recyclable:** Italian tile is an inert material manufactured from natural raw materials and will break down naturally at the end of its life cycle. Additionally, it is a recyclable product through the reuse of the material in the manufacturing process (minimizing natural resource use and waste).

**8 Recycled:** A growing number of Italian tiles contain a percentage of pre- and post-consumer recycled content, which can contribute points toward USGBC LEED certification. Italian ceramic tile manufacturers recycle 97% of process water and 99.5% of production and purification waste.

**9 Resistant:** Tile is resistant to extreme weather conditions, chemicals' impact, water, moisture, temperature change and UV rays; giving ceramics the edge in hard environmental stress situations. It is also fire-resistant and does not create additional combustion material (in fact, it may help reduce the spread of fire) nor does it contribute to the toxic fumes and smoke when a fire occurs.

**10 Responsible:** Italian ceramic tile manufacturers are organized in industrial districts and are directly involved in the responsible management of their territory. They have direct control on the environmental and social impact of their manufacturing operations (air, water, waste, corporate social responsibility, etc.) and on the local trade of their products.

## ENVIRONMENTAL LABELS & CERTIFICATIONS

There are a growing number of certifications that are either management, product or project focused. In order to stay up-to-date, visit the websites below.

### Management:

- *EMAS (Eco-Management and Audit Scheme)* is a voluntary management system created by the European Commission in 1995 to recognize and reward proactive organizations in the European Union and the European Economic Area (EAA) that go beyond the basic environmental laws and constantly improve their environmental performance, credibility and transparency.

- *ISO (International Organization for Standardization)* is a global organization that sets standards for good management practice. While the ISO 9001:2000 gives requirements for quality management systems, the ISO 14000 family of standards addresses various aspects of environmental management systems (EMS). For an organization to be both certified and registered, it has to have been independently audited and confirmed as being in conformity with the ISO standards for which it was issued a certificate.

### Product:

- *EU Eco-Label "Flower"* is a tool aimed at promoting sustainable production and consumption. The European Union Eco-labeling Board (EUEB), in close collaboration with the European Commission, develops ecological criteria for product groups based on a life-cycle analysis. Those manufacturers and service providers who apply and are awarded the Eco-label can use the "Flower" to market the certified product(s). Being a market-based instrument, its primary function is to stimulate both the supply and demand of products with a reduced environmental impact.

- *EPD (Environmental Product Declaration)* is a tool aimed at providing relevant, verified and comparable information about the environmental impact from goods and services.

- *ANSI A138.1 Standard* - Most Italian ceramic tiles meet or exceed this new voluntary standard for sustainable ceramic tiles, glass tiles and tile installation materials.

### Project:

- *LEED (Leadership in Energy and Environmental Design)* is a rating system developed by the USGBC®. The certification provides independent, third-party verification that a building project meets the highest green building and performance measures. Tile can contribute to certification point(s) assigned to the following categories:

- *Recycled Content*, Section MR 4 (2 LEED points)
- *Regional Materials*, MR Credit 5 (2 LEED points are granted if the use of local raw material is equal to 20% of the total value of the raw materials)
- *Heat Island Effect (Non-Roof)*, SS Credit 7.1 (1 LEED point)
- *Heat Island Effect (Roof)*, SS Credit 7.2 (1 LEED point)
- *Minimum Energy Performance*, EA Prerequisite 2
- *Optimize Energy Performance*, EA Credit 1 (1 to 19 LEED points)
- *On-site Renewable Energy*, EA Credit 2 (1 to 7 LEED points)
- *Low-Emitting Materials*, EQ Credit 4.1 (1 LEED point for Low-Emitting Materials: Adhesives and Sealants)
- *Low-Emitting Materials*, EQ Credit 4.3 (1 LEED point)
- *Innovation in Design*, ID Credit 1 (1 to 5 LEED points)
- *Regional Priority*, RP Credit 1 (1 to 4 LEED points)

Note: Mineral-based finish flooring products such as tile, masonry, terrazzo, and cut stone without integral organic-based coatings and sealants and unfinished/untreated solid wood flooring qualify for credit without any IAQ testing requirements. However, associated site-applied adhesives, grouts, finishes and sealers must be compliant for a mineral-based or unfinished/untreated solid wood flooring system to qualify for credit.

- LEED Reference Guide for Green Building Design and Construction April 14, 2010

### LEED 2009 for New Construction & Major Renovations Project Totals:

100 base points; 6 possible Innovation in Design and 4 Regional Priority points

Certified: 40–49 points, Silver: 50–59 points, Gold: 60–79 points, Platinum: 80 points and above

### Helpful Websites:

<http://ec.europa.eu/environment/emas>

[www.iso.org](http://www.iso.org)

[www.ecolabel.eu](http://www.ecolabel.eu)

[www.usgbc.org](http://www.usgbc.org)

[www.ansi.org](http://www.ansi.org)



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The Italian Association of Ceramics

