GRUPPO BARDELLI S.P.A.
Via Giovanni Pascoli 4/6
20009 - Vittuone (MI) Italy
Tel.: +39.02.90251844
P. IVA 09965410153
pec: gruppobardelli@legalmail.it
Reg. Impr. MI 09965410153
Cap. soc. i.v. Euro 10.256.016,00
www.gruppobardelli.com

Cerrione, January 2021

CONTRIBUTION TO OBTAINING CREDITS FOR LEED CERTIFICATION OF BUILDINGS

Ceramica Vogue products contribute to obtaining credits for LEED BD&C v 4 (LEED Building Design & Construction) system in the thematic areas listed here below.

Product Classification: Glazed ceramic tiles, dry pressed with low water absorption (0,5% < Eb ≤ 3%) Group B1b - M - GL EN 14411:2016 H appendix

<table>
<tr><th>MR Credit</th><th>Description</th><th>Production</th><th>Points</th></tr>
<tr><td>Sustainable Site (SS)</td><td>Sustainable Site – Heat Island Reduction (non roof)</td><td>The Ceramica Vogue products do not contribute to change the energy balance of the environments where installed. They don’t produce any Urban Heat Island Effect, thanks to their very good physical properties. This encourages the external use of these products for both open and covered spaces.

SRI (Solar Reflectance Index) 0,78
(Product Ref. Vogue System Interni Ghiaccio – White)
Solar Reflectance index available for other plain colours

The thermal conductivity λ of Ceramica Vogue Product Range is 1,311 Watt/m·°K (ASTM E 1530:2006 – Product Ref. Ceramica Vogue System Interni).

For this reason Vogue System is particulary indicated for heating floors systems.</td><td>1-2</td></tr>
<tr><td>Materials & Resorurces (MR)</td><td>Building Product Disclosure and Optimization – Environmental Product Declaration</td><td>Industry-wide (generic) EPD available</td><td>1-2</td></tr>
<tr><td></td><td>Building Product Disclosure and Optimization – Sourcing of Raw Materials</td><td>Ceramica Vogue products are manufactured using production cycles that guarantee excellence in terms of care and protection of the environment.

Ceramica Vogue tiles are produced using non-metallic inorganic raw materials in a powdery state, such as clays, feldspar and sands. During the production, a sintering process occurs at high temperature (higher than 1000 °C) transforming powders into a solid ceramic object, partially crystalline and partially amorphous, with the chemical composition reported in the table below:

<table>
<tr><th colspan="2">Constituents: Product Composition</th><th></th><th>Approx. Percent by Weight depending on finishing</th></tr>
<tr><td rowspan="6">Body</td><td>Clay</td><td>Clay</td><td>ES2824</td><td>20-25%</td></tr>
<tr><td>Feldspar</td><td>Feldspar</td><td></td><td>28-35%</td></tr>
<tr><td></td><td>Cooked Ground Waste (*)</td><td></td><td>5-15%</td></tr>
<tr><td>Inert</td><td>Sand</td><td>VVR</td><td>5-15%</td></tr>
<tr><td></td><td>Clay</td><td>FCS4</td><td>5-15%</td></tr>
<tr><td></td><td>Raw Waste (*)</td><td></td><td>5-15%</td></tr>
<tr><td></td><td>Water</td><td>Recycled water</td><td></td><td>100%</td></tr>
<tr><td rowspan="12">Surface</td><td>Engobe</td><td>Engobe</td><td></td><td>100%</td></tr>
<tr><td rowspan="11">Glaze</td><td>Frit</td><td></td><td>10-90%</td></tr>
<tr><td>Glaze Compounds</td><td></td><td>100%</td></tr>
<tr><td>Feldspar</td><td></td><td>30-40%</td></tr>
<tr><td>Calcium Carbonate</td><td>CaCO3</td><td>10-20%</td></tr>
<tr><td>Zirconium</td><td>ZrO2</td><td>5-10%</td></tr>
<tr><td>Zinc Oxide</td><td>ZnO2</td><td>3-8%</td></tr>
<tr><td>Alumina</td><td>Al2O3</td><td>6-10%</td></tr>
<tr><td>Clay</td><td></td><td>5-10%</td></tr>
<tr><td>Kaolin</td><td>Al2Si2O5(OH)4</td><td>5-10%</td></tr>
<tr><td>Pigments</td><td></td><td>0-15%</td></tr>
</table>
</td><td>1-2</td></tr>
</table>

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		(*) Ceramica Vogue products are manufactured using recycled products as here below reported. Pre-Consumer Recycled Content (% per mass unit) — Up to 30% Post-Consumer Recycled Content (% per mass unit) — 0% Total Recycled Content (% per mass unit) — Up to 30%	
	Building Product Disclosure and Optimization – Sourcing of Raw Materials	Production Plant: Ceramica Vogue - Via Papa Giovanni XXIII, 100 - Loc. Vergnasco 13882 Cerrione (BI) – Italy Raw Materials sourcing origin: 1. 40% of Ceramica Vogue raw materials are quarried in a 100 miles radius. 2. 60% of Ceramica Vogue raw materials coming from a distance > 100 miles from the production plant	1-2
	Construction and Demolition Waste Management - Reduction of total waste material	The type of waste material expected to occur from the use of Ceramica Vogue tiles includes off cut materials and packaging. The packaging of Ceramica Vogue products is environmentally sustainable as it is totally recyclable. • The Amount of non-hazardous waste (Cardboard box) expected per product unit based on mass is 6,05 kg/ton • Amount of non-hazardous waste (Cardboard box) that can be recycled/reused is 6,05kg/ton	1-2
Low-Emitting Materials (IEQ)	Indoor Environmental Quality - Low-Emitting Materials	Ceramica Vogue products do not emit any VOC (Volatile Organic Compounds). No traces of VOC have been reckoned from the qualified external laboratories that examined our materials Third Party Certification Available: UL 2818 – 2013 Gold Standards for Chemical Emissions for building Materials, Finishes and Furnishings.	1-3

Best Regards

Ceramica Vogue