

Oderzo, January 2021

CONTRIBUTION TO OBTAINING CREDITS FOR LEED CERTIFICATION OF BUILDINGS

Appiani 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 mosaic tiles, dry pressed with low water absorption ($0,5\% < E_b \leq 3\%$) Group B1b - M - GL EN 14411:2016 H appendix

MR Credit	Description	Production																				
Sustainable Site (SS)	Sustainable Site – Heat Island Reduction (non roof)	<p>Appiani 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.</p> <p>SRI (Solar Reflectance Index) 0,87 (Anthologhia MOS 13 Calla - White)</p> <p>Solar Reflectance index available for other colours</p>																				
Materials & Resources (MR)	Building Product Disclosure and Optimization – Environmental Product Declaration	Industry-wide (generic) EPD available																				
	Building Product Disclosure and Optimization – Sourcing of Raw Materials	<p>Appiani products are manufactured using production cycles that guarantee excellence in terms of care and protection of the environment.</p> <p>Appiani mosaics 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:</p> <table border="0"> <thead> <tr> <th colspan="2">Constituents: Material Composition</th> <th>Approximate Percent by Weight</th> </tr> </thead> <tbody> <tr> <td rowspan="4">Body</td> <td>Clay</td> <td>60 – 70 %</td> </tr> <tr> <td>Feldspar</td> <td>20 – 25%</td> </tr> <tr> <td>Internal Scrap</td> <td>5 – 10 %</td> </tr> <tr> <td>Additives</td> <td>1 -1,5 %</td> </tr> <tr> <td>Surface</td> <td>Glaze</td> <td>12,5 %</td> </tr> </tbody> </table> <p>Appiani mosaics are manufactured using recycled products as here below reported.</p> <table border="0"> <tbody> <tr> <td>Pre-Consumer Recycled Content (% per mass unit)</td> <td>>30%</td> </tr> <tr> <td>Post-Consumer Recycled Content (% per mass unit)</td> <td>0%</td> </tr> <tr> <td>Total Recycled Content (% per mass unit)</td> <td>>30%</td> </tr> </tbody> </table>	Constituents: Material Composition		Approximate Percent by Weight	Body	Clay	60 – 70 %	Feldspar	20 – 25%	Internal Scrap	5 – 10 %	Additives	1 -1,5 %	Surface	Glaze	12,5 %	Pre-Consumer Recycled Content (% per mass unit)	>30%	Post-Consumer Recycled Content (% per mass unit)	0%	Total Recycled Content (% per mass unit)
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	Building Product Disclosure and Optimization – Sourcing of Raw Materials	<p>Production Plant: Appiani – Via Pordenone 13, 31046 Oderzo (TV) – Italy</p> <p>Raw Materials sourcing origin:</p> <ol style="list-style-type: none"> 100% of Appiani raw materials coming from a distance within 250 miles from the production plant
	Construction and Demolition Waste Management - Reduction of total waste material	<p>The type of waste material expected to occur from the use of Appiani mosaics includes off cut materials and packaging. The packaging of Appiani products is environmentally sustainable as it is totally recyclable.</p> <ul style="list-style-type: none"> The Amount of non-hazardous waste (Cardboard box) expected per product unit based on mass is 14,59 kg/ton Amount of non-hazardous waste (Cardboard box) that can be recycled/reused is 6,05kg/ton
Low-Emitting Materials (IEQ)	Indoor Environmental Quality - Low-Emitting Materials	<p>Appiani 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</p> <p>Third Party Certification Available: UL 2818 – 2013 Gold Standards for Chemical Emissions for building Materials, Finishes and Furnishings.</p>

Best Regards

Appiani