



CENTRO CERAMICO - BOLOGNA

CENTRO DI RICERCA E SPERIMENTAZIONE
PER L'INDUSTRIA CERAMICA

Accreditamento SINAL n. 0058

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VOC

Volatile Organic Compounds Emission of ceramic tiles manufactured by CERINDUSTRIES S.p.A.

As regards ceramic tiles manufactured by CERINDUSTRIES S.p.A. (brands: CERDOMUS and PORCELLANA DI ROCCA), according to the **IEQ Credit 4.3**: "Low-Emitting Materials - Flooring Systems" of LEED Buildings Certification (Leadership in Energy and Environmental Design; LEED 2009 NC Rating System - USGBC),

It is stated that

- a) Ceramic tiles manufactured by CERINDUSTRIES S.p.A. are obtained by an industrial process in which the firing phase is oxidant and it is performed at high temperature (ranging from 950°C to 1200°C), depending on the type of product.
The following types are produced:
- Unglazed porcelain stoneware tiles with water absorption $\leq 0,5\%$ (EN 14411, annex G);
 - Glazed porcelain stoneware tiles with water absorption $\leq 0,5\%$ (EN 14411, annex G);
 - White body single-fired glazed tiles (monoporosa) with water absorption $>10\%$ (EN 14411, annex L).
- b) During firing, in the presence of oxygen, any organic compounds in the ceramic product become oxidised (combustion), with consequent emission of combustion gases. This process can be considered completed in a temperature range of 450°C÷500°C. Above this temperatures, no organic compounds can be present in the fired material.
- c) It can be concluded that, after firing at these temperatures, **ceramic tiles manufactured by CERINDUSTRIES S.p.A.:**
- **are completely without VOC;**
 - **won't give off VOC during their use, in any operating conditions.**

Prof. Eng. Giorgio Timellini

Director