



# CERAMIC TILE: FOR A SAFE AND HEALTHY HOME

Ceramic tile is not only beautiful, it's also healthy for your home. It contains none of the chemicals that have been in the news associated with other flooring products, and it's long-lasting, easy to clean, fire-safe, and offers many slip-resistant choices.

### **Made of Clay and Other Naturally-Occurring Minerals: Free of Formaldehyde, VOCs, and PVC**

Ceramic tile\* does not contain the chemicals in other floor coverings that are receiving increased attention for their possible adverse health effects, such as formaldehyde,<sup>1-4</sup> VOCs (volatile organic compounds)<sup>5-9</sup> or PVC (polyvinyl chloride).<sup>10-11</sup>

**Zero VOCs.** Some VOCs emitted by non-ceramic building products can contribute to a wide variety of health problems and "Sick Building Syndrome," according to various health experts.<sup>12-15</sup> Because ceramic tile is fired at extremely high temperatures, producing an inorganic material, it has zero VOCs.\*

**Formaldehyde-Free.** Ceramic tile\* contains none of the formaldehyde found in some other floor coverings. Formaldehyde is a chemical long associated with respiratory disorders, and exposure is a particular concern for children and the elderly, according to the Centers for Disease Control (CDC).<sup>16-17</sup> In fact, formaldehyde emissions for several wood-based building and flooring products have been federally restricted since 2011 under the Formaldehyde Standards for Composite Wood Products Act.<sup>18-21</sup> As a fired product, ceramic tile is formaldehyde-free and not subject to this or any other such restriction.

**PVC-Free.** Ceramic tile\* is also free from PVC, a resin used in other types of floor coverings, and regularly a subject of concern and discussion among health experts.<sup>22-33</sup>

The easy solution for flooring? Use ceramic tile, which is free of VOCs, formaldehyde, and PVC!

Disclaimer: The above information is general in nature and is not specific to any one building product. Ceramic tile products and their properties can vary among manufacturers, products lines, and even among tiles in the same product line. Likewise, non-ceramic tile products have their own properties and can also vary among manufacturers and products. Products that contain any of the chemicals referenced above may contain them in manners that are not known to be harmful and/or that comply with applicable health and safety regulations. Contact the manufacturer of a specific building product to learn about its particular characteristics. See reverse for notes and numbered references.



### ✓ **HEALTHY**

- Formaldehyde-Free\*
- VOC-Free\*
- PVC-Free\*
- Hypoallergenic\*
- Natural Ingredients†
- 60-Year Service Life‡

### ✓ **SAFE**

- Non-Flammable\*
- Slip-Resistant Options
- Zero Smoke-Development\*

### **Occupant Safety**

Of the many flooring choices available, ceramic tile stands out when slip/fall safety is a consideration because of the thousands of floor tile choices that are slip-resistant when wet. This is in stark contrast to floorings that, according to their manufacturers, must be kept dry in order to be slip-resistant.

Additionally, ceramic tile\* is non-flammable and does not produce smoke in a fire, meeting the flame spread and smoke development requirements of Section 803 of the International Building Code (IBC) for interior wall and ceiling materials.

### **Environment**

The UL-certified Environmental Product Declaration (EPD) for North American-Made ceramic tile shows that North American-Made ceramic tile has the lowest environmental impact across all impact categories, when compared to other floorings with generic EPDs<sup>34-35</sup> evaluated under the same product category rules.<sup>36</sup> With a 60-year service life<sup>34</sup> this makes ceramic tile both cost-effective and the best choice for reducing negative environmental impacts, resource use, and demolition waste, when compared to flooring products that need to be replaced more frequently.

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## Notes

\*Applies to fired ceramics free of any mesh backing or topical sealer. Not all mesh backings and topical sealers produce volatile organic compounds or contribute to flame spread. Consult manufacturer for specific product information if desired.

<sup>†</sup>Based on independent studies performed at TCNA Laboratory on tiles without mesh backing or topical sealers.

<sup>‡</sup>More than 95% of a fired ceramic tile is made from clay and other raw materials found in nature.

<sup>§</sup>Per UL-Certified Environmental Product Declaration (EPD) for North American-Made ceramic tile.