## What are those white dots on my white marble?

**Q.** What are those white dots on my white marble?

**A.** This article, by Frederick M. Hueston, <u>Stone Forensics</u>, provides the answer.

Have you ever wondered what those white dots are on white marble? You sometimes see thousands of them in high-traffic lobbies. Although you can see them, you can't feel them. What are these mystery dots?

If you were to take a hammer and hit a piece of white marble, it would leave a white dot that stone professionals call *stuns* or *crystal fractures*. I theorized that marks like these are caused by an explosion of the calcium crystal within the stone. I reached out to Kendall L. Hauer, Ph.D. of Miami University, Department of Geology and Environmental Earth Science to verify my theory. He explained, "When any color of marble/limestone is crushed, it will take the form of a white powder. Essentially, what you are seeing is the "streak" of calcite, which is always white. It is always white because powdering limestone essentially negates the effect of any color-causing impurities."

Wikipedia's entry on *mineral streak* puts it this way: "Small amounts of an impurity that strongly absorbs a particular wavelength can radically change the wavelengths of light that are reflected by the specimen, and thus change the apparent color. However, when the specimen is [powdered] to produce a streak, it is broken into randomly oriented microscopic crystals, and small impurities do not greatly affect the absorption of light [of these crystals]."

So, in other words, the impact of a sharp pointed object, such as a woman's

high heel, will crush the calcium crystal, leaving a white dot. Now you know.

It follows that you probably want to know how to remove these white dots. Unfortunately, there is not really anything anyone can do about it. Stone Restoration contractors will sometimes try to grind them out only to find that they are very deep. In many cases, they are even deeper than they are wide.

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