TECHNICAL Queries+ Quandaries

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True Quartzite Will Not Etch

Q: We have been selling a quartzite for several months now, but we are getting complaints from customers that the material is etching. I thought quartzite was supposed to be acid resistant. Am I mistaken?

A: No, you are not mistaken. And we are getting this call with increasing frequency from nearly all regions of the country. There seems to be a recent attraction to quartzite products, and it appears that from a marketing perspective, numerous suppliers are trying to link the term "quartzite" to some products that aren't truly quartzite to boost their market appeal. The end result is a lot of products on the market that are called quartzite without being remotely close to being real quartzite. We've seen products marketed as "soft quartzite," "calcitic quartzite," and "dolomitic quartzite," all of which are conflicting terms. We've even seen the manmade quartz aggregate products referred to as "quartzite." The geology sections of the MIA's *Dimension Stone Design Manual* (DSDM) are quite well written, and below is what the DSDM explains about quartz-based stones:

> **Sandstone** is a nonmetamorphic sedimentary stone. When firmly cemented with silica, sandstone could be correctly identified as quartzite. However, it is suggested the name quartzite should be restricted for sandstone tightly cemented with homogeneous crystalline silica (quartz crystals).
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> **Quartzite**, the silica-cemented, unmeta-morphosed variety, tends to occur in sedimentary units or beds, and the thicker quartzite ledges are generally more useful than the thinner occurrences. With thicker units of quartzite, the distinction between metamorphosed and unmetamorphosed types makes little difference to those in the stone industry. Quartzite breaks across grains, not around grains. Thus, it is very hard (H=7), durable, and for practical purposes, not a soluble stone, making it a desirable material for some difficult installations where exposure to water may be a problem.
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> **Metaquartzite**. The metamorphic equivalent of quartzite is metaquartzite. Often difficult to differentiate from its nonmetamorphosed parent stone, metaquartzite has certain distinct features; for example, thin "partings" of clear mica often separate layers or bands of pure metaquartzite. Some deposits of the stone occur in layers only ⅛" to ½" thick, separated by the micaceous parting that allows easy separation or cleaving characteristic of mica sheets, due to weak molecular bonds.

A true quartzite would not be attacked by common acids found in household settings, and would have an overall hardness greater than that of a true granite, since granite contains a variety of softer minerals in addition to its quartz content. If your supplier calls a stone a quartzite, you would be well advised to verify

that before reselling it to your customer as a quartzite to avoid the very situation in which you've found yourself.

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