Title:
Marble And Granite – What Produces The Shine?

Word Count:
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Summary:
Many people make the assumption that marble, granite and other finely polished natural stones shine because a ‘polish’ has been added to them. Nothing could be further from the truth.

Natural stones are made of crystals. The crystals are made up of different minerals. Each mineral forms a different crystal shape. These different crystals interlock together to make up the stone. When stone is first quarried it has a very rough texture to its surface as it breaks along the c...

Keywords:

Article Body:
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Natural stones are made of crystals. The crystals are made up of different minerals. Each mineral forms a different crystal shape. These different crystals interlock together to make up the stone. When stone is first quarried it has a very rough texture to its surface as it breaks along the crystal joints. By using a series of graduated grinders the stone is ground down. The grinders are normally made from industrial diamonds and to start the process a very rough one is used. It is the same principle as sanding down wood. You start with glass paper that is very coarse and gradually use finer and finer glass paper until you have a fine, smooth finish to the wood. With stone the glass paper is replaced with diamond studded pads and these get finer and finer.

What the grinding is doing is cutting the rough edges off the stone by scratching it and as the diamonds become smaller and smaller the scratches become finer and ultimately microscopic. What you end up with is a very smooth surface to the stone. The crystals have by a slow process of finer and finer grinding been worn down until on the surface they are all perfectly flat and smooth with each other. A perfectly flat surface will reflect the light

uniformly and will look like glass.

Consider a mirror that reflects light uniformly giving you a clear sharp image. Make the glass curved or rippled and you get a less clear, less sharp image reflected back. The same applies to stone. If the crystals are flat then you get a perfect image reflected back and the stone looks incredibly shiny. Roughen the surface slightly and the reflected light ceases to give you a perfect reflection and the stone begins to dull. Any interference with the stones surface can cause this dulling to appear. It could be a series of minute scratches made by dirt or it could be caused by acid materials etching into the stone destroying its shine in that region.

To get the shine back the stone must be ground down again. Consequently the shine on a stone is not the product of adding some chemical to the stone but is a property of the stone itself.. The harder the stone the more difficult it is to grind but the greater degree of shine that can be achieved, which is why polished granite has the greatest degree of shine, followed by marble then limestone.