



Congratulations on selecting natural stone for your new countertops! Natural stone offers unparalleled timeless elegance and durability that will be sure to compliment your home for years to come. To maximize your enjoyment of this unique building product, please familiarize yourself with the following facts regarding natural stone countertops:

### **Stone is Unique**

Man has always found beauty in the random variation nature provides. Just as no two pieces of hardwood flooring or the stone used in masonry walls are exactly the same, each natural stone countertop differs one from the next. Each countertop was cut from a sheet of stone, which was cut from a larger block of stone, which was extracted from the earth. Stone extracted from the same quarries share the same mineral composition and are of similar coloring and as such, we classify them by the same names. Just as siblings sharing the same DNA are different, each individual stone slab is unique as mineral distribution differs from slab to slab. This includes, but is not limited to mineral alignment/veining, shading, pitting, and fissures. As such, please discuss your individual countertop layout with your fabricator prior to fabrication to ensure desirable qualities are maximized and whether undesirable characteristics may be cut around. Customers selecting stone countertops from a sample should expect their individual countertops to differ from the sample to various degrees. We strongly encourage customers to personally select and inspect any slabs to be used on their project to avoid disappointment in the finished product.

### **Mineral Composition and Processing of Granite Slab**

In the construction industry, "granite" refers to any stone that is igneous (or initially formed of molten magma) is mainly comprised of the minerals feldspar, quartz and mica. These minerals were prehistorically fused together to form a monolithic stone. As mentioned previously, large blocks of this stone are extracted from the earth and processed into stone and tile. It is important to note that the luster of the polished finish of a slab is not attributed to any wax or shellac, but rather is the stone itself reflecting light. Each piece of stone is cut into sheets or slabs. The slab undergoes a polishing process that uses powerful hydraulic polishing heads, water and diamond polishing pads. Successively finer diamonds polish the stone until the molecules are so close together so as to reflect light. The density of each mineral has a direct correlation to the luster of its polish. In other words, softer minerals like mica will not reflect light as well as more dense minerals such as feldspar, garnet and quartz. This fact is important in stone selection in relation to countertop placement, particularly in the presence of windows that expose the countertop to natural lighting. Natural lighting is reflected from the countertop surface and inherent imperfections become magnified just as ripples in a reflecting pool. Softer minerals and epoxy resin used to fill naturally occurring voids and fissures may

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appear to be dull or water spotted. Homeowners not anticipating this may incorrectly view their countertops as dirty, flawed or of inferior quality. Daltile Personnel are happy to recommend the most suitable stone for each particular situation during the selection process.

### **Fissures, Pits and Cracks**

Fissures occur naturally to differing degrees in almost all igneous stone. Without fissures, water would not be able to permeate deep into the stone and oxidize the minerals, which produces beautiful, vibrant colors.

Pits also inherently occur to differing degrees in almost all igneous stones. Pits occur when an individual grain of a mineral is dislodged during the cutting or polishing process.

Epoxy resin is used at the factory to fill each of these inherently occurring voids. In most cases cracks indicate that the stone was damaged during the handling, transportation or installation of the countertop or slab. Cracks occur when the stone is flexed through insufficient support. Cracks differ from fissures in that they will catch a fingernail when scratching the surface.

It is important to note that these features are difficult to see when the slab rests at a vertical angle. Please select your slabs carefully as use constitutes acceptance.

### **Density and Sealing**

As a general rule, there is a direct correlation between the density/porosity of granite and the darkness of the stone, Absolute Black being the most dense/least porous. Accordingly homeowners may expect most light colored stones to be significantly more porous and require resealing more frequently to prevent the stone from darkening from soaps and oils. Homeowners selecting lighter colored natural stone countertops should note that countertop sealer used to prevent staining is formulated to repel foods and oils and not necessarily water. Water beading on the surface, while being a good indicator of surface tension, may not necessarily be witnessed on a properly sealed countertop. Dark spots will occur in the presence of water in lighter colored granite countertops. Dark spots not drying within 20-30 minutes indicate the need for sealer to be reapplied. While no sealer waterproofs the surface of the stone, solvent based sealers have been shown to repel water better than water based sealers, but may be at the expense of repelling soaps and oils.