



The beauty of nature cannot be duplicated. Natural stone has long been the choice for counter tops in the finest homes. It remains the first choice for many of our customers. Different stone types have unique properties that offer advantages and disadvantages in various applications.

In addition to natural materials, there is a new generation of “stone like” materials usable wherever the natural product is used. This brief overview includes information on the advantages and disadvantages of these products as well.

Included in this introduction are non-stone materials such as wood, metal, laminate, etc.

## Marbles:

Marbles, serpentines, and onyxes are traditionally prized for their aesthetic appeal, accentuated by distinct veining and often bold colors. They are relatively softer than granite, although some serpentines are as dense as some granites. Marbles can be scratched by kitchen utensils, so it is best to use cutting boards and other protective measures. Use only non-abrasive products when cleaning marble. Marbles can also be etched by chemical attack or very “hard” water. These stones are calcium carbonate based and are damaged by exposure to acidic solutions such as lemon juice, tomatoes, vinegar, etc. The use of inappropriate cleaning agents may also trigger acidic attack. Acidic solutions can permanently etch the surface of the material. The application of a sealer will reduce, but not eliminate, the vulnerability to acidic attack. **However, with proper care and maintenance, marble countertops can endure for a lifetime**

## Soapstone:

Soapstone does not stain nor is it harmed by hot pots, citrus, wine, acids, or chemicals. It is largely composed of mineral talc, and thus rich in magnesium. The only maintenance recommended, not required, is the mineral oil treatment to enhance the natural darkening process the stone goes through and to ensure that it darkens evenly. Mineral oil is not needed for protection since it is naturally non-porous. Soapstone may be cleaned with any common household cleaner

## Limestone & Travertine:

Limestones and travertine are calcium based like marble. Therefore, they have the same weaknesses as marbles when used as countertops. Abrasion damage is a concern, particularly if the stone is polished. Many varieties of these stone types will absorb water to some degree and must be sealed to help protect them. It's attractive but impractical in a busy kitchen. Limestone resists heat well, but it nicks, cuts, and scratches easily, and even a high- quality sealer didn't fend off stains. So, blot spills immediately and periodically reseal

## Granite:

Granite is a natural product which is predisposed to flaking, crumbling, and chipping which can occur more frequently in exotic material. Sometimes the delicate character of some stone is evident by the mesh backing on the underside of the slab. Granite is prone to fusions, holes, fissures/extrusions (small visual cracks that are not faults within the slab and are prefilled with resin or colored filler). This material is delicate and more vulnerable during transport and especially in production. General handling and fabrication procedures, such as cut-outs, profiling may amplify the tendency for flaking and chipping. Due to the nature of this stone, any visibly porous areas, chips, flakes, or cracks will be filled at slab preparation before polishing and therefore may not be smooth to the touch. The surface of the slab is usually polished when purchased. Granite slabs are subject to variances in veining, color, shade, and texture. Granite requires periodic sealing. Although, some sealers will last up to fifteen years with proper maintenance

## Quartzite:

Often confused with quartz (because of the similarity of names), quartzite is a natural stone and not engineered. It is a metamorphic rock, created when sandstone is subjected to extreme heat and pressure deep within the earth's crust. The peculiarities of its formation make quartzite extremely hard and highly resistant to heat and water. It comes in various textures and colors and easily withstands heavy foot traffic and harsh weather conditions. Due to this exceptional durability and versatility, quartzite can be used in all kinds of exterior and interior applications. Quartzite surfaces withstand wear and tear very well and can be used in high traffic areas and harsh environments. They are easy to clean and stay beautiful for many years of heavy use. It resists heat and cold without cracking or sustaining other damage when exposed to extreme temperatures.

### Porosity

Quartzite has a range of porosities. Some, like Taj Mahal or Sea Pearl, have been highly metamorphosed, and the minerals are bonded together tightly. White Macaubas and Calacatta Macaubas have been exposed to less intense pressure, so they are more porous and will benefit from sealing

## Quartz:

Quartz continues to become an alternative to natural stone. It's a mix of mineral, color and resin. This man-made stone offers an increasingly realistic look mimicking materials such as marble, granite, concrete, and more. But quartz offers easier maintenance than those materials. Quartz is less heat resistant than granite or quartzite, however. It can stain or be discolored by some foods. Samples of quartz products are to be considered "representative of the structure and color." The actual material may vary slightly in both categories. Variation in color or pattern is possible. Especially from a bundle to bundle.

**Quartz products should only be specified for indoor applications**

## Ultra-Compact Surface (PST)

Ultra-Compact is composed of naturally existing, inorganic minerals that are subjected to an extreme heat high pressure process called "Particle Sintering Technology (PST)." It's essentially an accelerated version

of the metamorphism process. This creates a manufactured product with exceptional properties. It is highly UV, scratch, stain, fire (heat), abrasion and freezing (thawing) resistant. It is also highly resistant to water absorption, has superior mechanical resistance, maintains color stability, is dimensionally stable, is non-combustible and is highly resistant to hydrolysis. Slab sizes are generally larger than others (as large as 126" x 56"). Thickness options are .8, 1.2 and 2.0 cm. This product is an excellent choice for both interior and exterior applications

## Porcelain

They're a part of the engineered stone family. Porcelain is made from kaolinite clay baked in extreme heat (1200–1400 °C) to harden it into a dense and highly durable material. Impurities such as silica, mineral oxides, and feldspars do exist in the clay. But rather than detract from porcelain's quality, these impurities only add to porcelain's strength and color. A porcelain \*countertop has no problem at all with handling hot pots and pans directly on its surface.

As mentioned earlier, porcelain is even stronger than the hardest of granite. What's more, it surpasses the strength of granite by 30% and does so at a much lower weight. Porcelain's tough structure also makes it scratch-resistant. It's also impervious to water. Besides being very low-maintenance in keeping clean, it's also non-porous and stain-resistant, therefore sealing is not required. A major advantage that porcelain has over quartz is that it won't get discolored by direct and prolonged sunlight. As porcelain is an engineered stone, patterns and colors can be added during the fabrication process for the final product. *Porcelain is available in polished, honed, or natural finish and is great for backsplashes, flooring, fireplace surrounds, exterior applications, steam showers, shower and tub surrounds, wall cladding and wainscoting.* All the mentioned uses are covered under our standard warranty except for \*countertops.

You can get a porcelain \*countertop with a solid color. Or you can achieve the look of marble at many times its durability. There are also limited \*countertop edge profile options for porcelain – you pretty much only get a choice of square or mitered edge. Since \*porcelain countertops are thinner (6mm or 0.23622" and 12mm or 0.472441") than other materials, a mitered edge is a good choice to give the illusion of a thicker slab. The \*countertop fabrication process is always a lot trickier working with high-density materials.

***\*Currently, we strongly recommend against the use of porcelain slabs for counter tops. Further, we do not guarantee the product from fracturing or breaking when used for that purpose during the production or installation process.***

## High Pressure Laminates (HPL)

High Pressure Laminate or HPL, is the direct descendent of the original plastic laminate. It is one of the most durable decorative surface materials and is available with special performance properties including

chemical, fire and wear resistance. Special grades of HPL can be post-formed around curved edges by application of heat and restraint.

HPL is produced by saturating multiple layers of craft paper with phenolic resin. A layer of printed décor paper is placed on top of the craft paper before pressing. The resulting sandwich is fused together under heat and pressure (more than 1,000 PSI). Because phenolic and melamine resins are thermoset plastics, the curing process transforms the resin into plastic by a cross linking process that converts the paper sheets into a single, rigid laminated sheet. Thermosetting creates strong, irreversible bonds that contribute to its durability.

High pressure laminate is laminated to a composite panel utilizing a variety of adhesives. Particleboard or MDF are the preferred substrate because they provide a stable, durable, consistent, and economical foundation. Due to its durability, high pressure laminates are a common choice for horizontal surfaces including flooring, countertops, and desktops.

## Butcher Block

Butcher block tops are a beautiful addition to a kitchen. Natural wood has natural voids, expands, and contracts with humidity and is subject to separations and gouging. Oil-finished wood was better at resisting heat, but stains spread and are impossible to remove. Varnished butcher block is very stain-resistant but still have the natural wood properties. These are part of the beauty. Not a good choice for a sink area.

## Stainless Steel

Stainless steel has all the qualities needed for an indestructible kitchen worktop. Heat-resistant? Check. Non-staining? Check. Hygienic and easy to clean? Check. It's a nonporous material that unlike butcher block, concrete, and many natural stones, will not absorb even the toughest of cooking ingredients—which means that stainless doesn't stain or harbor bacteria. Hot pots and pans can be placed directly on its surface without worry. That said, stainless steel, like many materials, shows scratches, especially if sharp knives and other tools are used directly on it. (And stainless itself will damage knives, so it's wise to cut on a cutting board.) Most stainless used for countertop applications is brushed, which serves to camouflage small scratches, but, even so, it will patina overtime.