

## Stone Types

The two most basic types of stone used in the construction and building industry are natural stone such as marble, granite, or limestone and synthetic stones that consist of stone chips suspended in cement or resin mix.

Natural stone can be grouped into three classes. Igneous rock is formed when molten rock (called lava or magma) cools and hardens. Granite is an example of an igneous rock. Sedimentary rock is formed from biological deposits that have undergone consolidation and crystallization. Limestone and sandstone fall into this category. Metamorphic rock is formed when other kinds of rocks are changed by great heat and pressure inside the earth. Marble, slate, and quartzite are examples of metamorphic rocks.

**GRANITE** An igneous stone that is extremely hard, dense and resistant to scratches and acid etching. It is an ideal stone for use in flooring and in food preparation areas. Hundreds of varieties of granite exist.

**MARBLE** A derivative of limestone, marble is a metamorphic stone that can be polished. Marble is characteristically soft and easily scratched or etched by acids. There are countless types of marble from around the world.

**LIMESTONE** A sedimentary stone formed from calcite and sediment that comes in a variety of earthen colours.

**SANDSTONE** This sedimentary stone is primarily composed of loose grains of quartz sand that are rough in texture. A number of varieties are available.

**TRAVERTINE** A crystallized, partially metamorphosed limestone, which because of its structure, can be filled and honed and is dense enough to be a type of marble.

**SLATE** This metamorphic stone has a sheet-like structure composed of clay, quartz, and shale and comes in a multitude of colours including reds and greens.

**AGGLOMERATE STONE** This synthetic stone is made from natural stone chips suspended in a binder such as cement, epoxy resins, or polyester. The most well known agglomerated stone is poured-in-place terrazzo, used in building for thousands of years.

## Stone Finishes

### Common finishes for stone.

**POLISHED** High shine. The polish may last a long time or may be unstable depending on the type of stone. Granite, marble and limestone are frequently polished, and require varying degrees of maintenance to preserve the shine.

**HONED** This satin finish looks very “soft”, shows few scratches, and requires very little maintenance. Marble, limestone, and slate are appropriate stones for a honed finish.

**ACID-WASHED** Shiny with small etching marks (pits in surface). An acid-washed finish shows fewer scratches and is much more rustic in appearance than a honed finish. Most stones can be acid-washed but the most common are marble and limestone. Acid washing is also a way to soften the shine on granite.

**SAW-CUT REFINED** Matt finish. After initial cutting, the stone is processed to remove the heaviest saw marks but not enough to achieve a “honed” finish. Granite, marble, and limestone can be purchased this way, typically on a special order basis.

**FLAMED** Rough texture, very abrasive. This finish is used mostly for exterior applications as flooring or as facing on commercial buildings, is labour intensive, and can be costly. The texture is achieved by heating the surface of the stone to extreme temperatures, followed by rapid cooling. Flaming is primarily done to granite.

**SPLIT-FACED** Rough texture, not as abrasive as flamed. This finish is typically achieved by hand cutting and chiselling at the quarry, exposing the natural cleft of the stone. This finish is primarily done on slate.

**TUMBLED** Smooth or slightly pitted surface, broken rounded edges and corners. There are several methods used to achieve the tumbled look. 20mm thick tiles can be tumbled in a machine, or 3cm tiles can be tumbled and then split, creating two tiles that are tumbled on one side. Marble and limestone are the primary candidates for a tumbled finish.

**BRUSHED** A worn-down look achieved by brushing the surface of the stone, simulating natural wear over time.