

LIMESTONE SEALING CARE & MAINTENANCE

Limestone is a porous to very porous stone and when used in flooring should be sealed to protect the stone from effects of water marking, water staining and staining from foods and drinks. In addition to normal staining, limestone can suffer from the effects of tradesmen such as construction debris, cement, grout and heavy foot traffic. To minimize the damage and promote easy cleaning Spirit Pre-Seal should be applied to the face and edges of the tile prior to the stone being exposed to water. Spirit Pre-Seal will act as a grout release and stabilize the stone to keep contaminants near the surface. It is important to allow the pre-sealed stone at least 24 hours to dry and cure before laying or grouting to ensure the full effect.

Once the stone has been pre-sealed, laid and grouted and approximately three days have passed for grouting to harden, the cleaning process can begin. Because limestone is composed of calcium carbonate and other minerals that react with acidic cleaners, no acid should be used to clean or remove cement or grout. If an acidic cleaner is used, damage may occur to the face of the stone. If Spirit Pre-Seal has been applied correctly and cured, grout smear and soiling can be cleaned using Spirit Neutral Cleaner and a brush. This is a simple way to clean and prepare the surface for the finishing products to be applied. Once the stone is clean and dry Spirit Premium Seal can be applied. The coverage rate may vary depending on the porosity but normally 8 to 10 square metres per litre will complete the job. If the stone is inside, a coating such as Spirit Satin Seal may be applied after washing with Spirit Neutral Cleaner. This will limit the beading effect and allow the Spirit Satin Seal to level and dry. Two coats will give long lasting protection and a low sheen to the stone. For daily cleaning use Spirit Neutral Cleaner mopped on and allowed to dry. For periodic heavy cleans use Spirit HDC to remove heavy buildup of soiling.

Limestone is a sedimentary rock composed more than 50% by weight of calcium carbonate. Calcite is the dominant mineral, although aragonite and dolomite are also present. Approximately 20% of all sedimentary rocks are limestone's.

Limestone's are composed of a mixture of grains of calcium carbonate, clear crystalline calcite, and carbonate mud. Lime-secreting organisms, the major source of these components, produce carbonate sediment (both mud and coarser particles) and sedimentary structures – the latter by burrowing and boring activity. Other sources include calcareous algae and filamentous blue-green algae, which produce carbonate mud, grains, and structures such as stromatolites. Most limestone's were deposited in subtropical to tropical zones, and sedimentation occurred in shallow water (less than 15 metres). It is in these areas that the variables that control life (temperature, light penetration, and nutrient supply) are most advantageous. In addition to the fossil content, the clastic textures of some limestone's, crossbedding, and other indicators of current action also imply the shallow-water origin of limestone's.

Limestone's differ greatly in texture and colour, depending on the size of the shells or crystals composing them and the impurities they contain. Most limestone's are light in colour and contain fossils. Many are highly fossiliferous and represent ancient shell banks or coral reefs. Minor constituents include silica (usually less than 5%), feldspar, clays, and pyrite. Limestone's can form organically or inorganically. Organic

limestone's include chalk, coquina, and other such foraminifera-containing deposits. Examples of inorganic limestone's include travertine and most oolites.

Limestones are important because they are reservoirs for petroleum and natural gas. They are also reservoirs for groundwater and for ore deposits such as lead and zinc. Limestone is used for agricultural lime, cement, building stone, and concrete aggregate.

