



the natural stone & tile specialists

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LIMESTONE GUIDE

POLISHED

Sealing:

- **Spirit Pre-Seal** can be used on the back of the tiles to prevent moisture stains bleeding through from the glue.
- **Spirit Water-based Premium Seal** or **Spirit Hard Surface Seal** (solvent-based) can be used to final seal the tiles and grout to protect the stone from staining. These products will NOT prevent acid etching.

Cleaning:

- Grout smear should be removed within 3-5 days using **Spirit Neutral Cleaner** or **Spirit Rejuvenate**, if the grout has been left on for too long and hardened **Spirit Porcelain Crème** can be used. Spirit Phosphoric Acid Cleaner or Spirit H.D.C should NEVER be used on Polished Limestone.

HONED

Sealing:

- **Spirit Pre-Seal** can be used on all six sides of the stone to prevent water marking during the laying procedure.
- **Spirit Water-based Premium Seal** or **Spirit Premium Seal** (solvent-based) can be used to final seal the tiles and grout to protect the stone from staining. These products will NOT prevent acid etching.
- **Spirit Glossy Seal** can be used on floors internally to achieve a gloss finish; this product should NOT be used in bathrooms where slip resistance is needed. This product will prevent acid etching by leaving a physical barrier on top of the stone.

Cleaning:

- Grout smear should be removed within 3-5 days using **Spirit Neutral Cleaner** or **Spirit H.D.C**, if the grout has been left on for too long and hardened **Spirit Porcelain Crème** can be used. Spirit Phosphoric Acid Cleaner should NEVER be used on Limestone.

TUMBLLED OR SANDBLASTED

Sealing:

- **Spirit Pre-Seal** can be used on all six sides of the stone to prevent water marking during the laying procedure.
- **Spirit Water-based Premium Seal** or **Spirit Premium Seal** (solvent-based) can be used to final seal the tiles and grout to protect the stone from staining. These products will NOT prevent acid etching.
- **Spirit Uni-Seal** can be used internally or externally to give the stone a wet glossy look, this should NOT be used on water features or wet areas such as; bathrooms or around swimming pools where slip resistance is needed. This product will prevent acid etching by leaving a physical barrier on top of the stone.
- **Spirit Glossy Seal** can be used on floors internally to achieve a gloss finish. This product should NOT be used in bathrooms where slip resistance is needed. This product will prevent acid etching by leaving a physical barrier on top of the stone.

Cleaning:

- Grout smear should be removed within 3-5 days using **Spirit Neutral Cleaner** or **Spirit H.D.C.**, if the grout has been left on for too long and hardened **Spirit Porcelain Crème** can be used. Spirit Phosphoric Acid Cleaner should NEVER be used on Limestone.

CLEANING & SEALING OF HONED LIMESTONE

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.

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 limestones 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 classic textures of some limestone, cross bedding, and other indicators of current action also imply the shallow-water origin of limestone.

Limestone differs 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 limestones include chalk, coquina, and other such foraminifera-containing deposits. Examples of inorganic limestones 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.



PRE-SEALING

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.

CLEANING

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. It is very important that the grout residue is removed within 1 week as the grout may cure too much and become very difficult to remove. 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.

FINAL SEALING

If a natural look is desired than once the stone is clean and dry, **Spirit Water-Based Premium Seal** or **Spirit Premium Seal** (solvent-based) can be applied. This sealer will maintain the stones natural look and provide excellent stain resistance. The coverage rate may vary depending on the porosity and finish but averagely 8 to 10 square metres per litre will complete the job. If the stone is inside and you prefer a gloss finish, a coating such as **Spirit Glossy Seal** may be applied after washing with **Spirit Neutral Cleaner**. This will limit the beading effect and allow the **Spirit Glossy Seal** to level and dry. Two coats will give long lasting protection and a gloss to the stone. However **Spirit Glossy Seal** may alter the slip resistance.

Please Note: This is a general guide only. For detailed information please contact Spirit www.spiritsealers.com

CLEANER & SEALERS FOR THE TILING INDUSTRY