

## Care and Maintenance

Natural stone can be classified into two general categories according to its composition: Siliceous or Calcareous. Knowing the difference is critical when selecting cleaning products.

- **Siliceous Stone** is composed mainly of silica or quartz-like particles. It tends to be very durable and relatively easy to clean with mild acidic cleaning solutions. Types of siliceous stone include granite, slate, sandstone, quartzite, brownstone and bluestone.
- **Calcareous Stone** is composed mainly of calcium carbonate. It is sensitive to acidic cleaning products and frequently requires different cleaning procedures than siliceous stone. Types of calcareous stone include marble, travertine, limestone and onyx. What may work on siliceous stone may not be suitable on calcareous surfaces.

### Care and Precautions

- Use coasters under all glasses. Many common foods and drinks contain acids that will etch or dull the stone surface.
- **Do not** place hot items directly onto the stone surface. Use hot pads or trivets under hot dishes and placemats under china, silver, or other objects that can scratch the surface.
- **Do not** use products that contain lemon, vinegar, or other acids on marble or other calcareous stones.
- **Do not** use scouring powders or creams, these products contain abrasives that may scratch the stone.
- **Do not** use cleaners that contain acid such as bathroom cleaners grout cleaners or tub & tile cleaners.

### Cleaning Procedures and Recommendations

- Clean interior floors frequently using a clean non-treated dust mop. Sand, dirt, and grit can damage the natural stone surface due to their abrasiveness.

- Use mats or area rugs inside and outside an entrance to help minimize the sand, dirt, and grit that can scratch the stone. The underside of the mat or rug should have a non-slip surface.
- **Do not** use vacuum cleaners that are worn. The attachments or the wheels may scratch the surface.
- Clean stone surfaces with a few drops of neutral cleaner, stone soap or a mild liquid dishwashing detergent with warm water. Too much cleaner or soap may leave a film and cause streaks.
- Use a clean rag mop on the floors. Change the rinse water frequently.
- Rinse and dry the surface after washing.
- In bathroom and other wet areas, to remove soap scum, use a non-acidic soap scum remover or a solution of ammonia and water (about ½ cup ammonia to a gallon of water.) Frequent or over-use of an ammonia solution may eventually dull the surface of the stone.
- For stone used in outdoor pool, patio or hot tub areas, flush with clear water and use a mild bleach solution to remove algae or moss.
- For all countertops, Belstone recommends DryTreat Stain Proof Plus™ to be applied after installation to help to prevent staining, but this will not prevent etching of the surface.

### Spills

- Blot the spill with a paper towel immediately. Don't wipe the area, it will spread the spill.
- Flush the area with water and mild soap. Rinse several times.
- Dry the area thoroughly with a soft cloth.

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### Stain Removal

Surface stains can often be removed by cleaning with an appropriate cleaning product. Deep-seated or stubborn stains may require using a poultice. Refer to the following type of stains to determine how to remove the stain.

**Oil Based (*grease, tar, cooking oil, milk, cosmetics*)** - An oil-based stain will darken the stone and normally must be chemically dissolved so the source of the stain can be flushed or rinsed away. Clean gently with a soft, liquid cleanser with bleach OR ammonia OR mineral spirits OR acetone.

**Organic (*coffee, tea, fruit, tobacco, paper, food, urine, leaves, bark, bird droppings*)** - May cause a pinkish-brown stain. Clean with 12% hydrogen peroxide (hair bleaching strength) and a few drops of ammonia.

**Metal (*iron, rust, copper, bronze*)** - Iron or rust stains are orange to brown in color. Copper and bronze stains appear green or muddy-brown. Metal stains must be removed with a poultice. (Refer to section on Making a Using a Poultice). Deep-seated, rusty stains are extremely difficult to remove and the stone may be permanently stained.

**Biological (*algae, mildew, lichens, moss, fungi*)** - Clean with dilute (1/2 cup in a gallon of water) ammonia OR bleach OR hydrogen peroxide. DO NOT MIX BLEACH AND AMMONIA!

**Ink (*magic marker, pen, ink*)**

**Light Color Stones** - Clean with bleach or hydrogen peroxide.

**Dark Color Stones** - Lacquer thinner or acetone.

**Paint** - Remove with lacquer thinner or scrapped off carefully with a razor blade. Heavy paint coverage should be removed with a commercial "heavy liquid" paint stripper. Follow the manufacturer's directions for use of these products. Flush the area thoroughly with clean water. Do not use acids or flame tools to strip paint from stone. Paint strippers can etch the surface of the stone; repolishing may be necessary. Normally, latex and acrylic paints will not cause staining. Oil-based paints, linseed oil, putty, caulks and sealants may cause oily stains. Refer to the section on oil-based stains.

**Water Spots and Rings** - Buff with dry 0000 steel wool.

**Fire and Smoke Damage** - Older stones and smoke or firestained fireplaces may require a thorough cleaning to restore their original appearance. Commercially available "smoke removers" may save time and effort.

**Etch Marks** - Caused by acids left on the surface of the stone. Some materials will etch the finish but not leave a stain. Others will both etch and stain. Once the stain has been removed, wet the surface with clear water and sprinkle on marble polishing powder available from a hardware store or local stone dealer.

**Efflorescence** - Caused by water carrying mineral salts from below the surface of the stone rising through the stone and evaporating. When the water evaporates, it leaves the powdery substance. If the installation is new, dust mop or vacuum the powder. Do not use water to remove the powder, it will only temporarily disappear.

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**Scratches and Nicks** - Slight surface scratches may be buffed with dry 0000 steel wool. The stone will need to be repolished for deeper scratches and nicks in the surface.

### Making and Using a Poultice

A poultice is a liquid cleaner or chemical mixed with a white absorbent material to form a paste. The poultice is spread over the stain area to draw out the stain into the absorbent material. Poultice procedures may have to be repeated to thoroughly remove a stain. Some stains may never be completely removed.

### Poultice Materials

Poultice materials include kaolin, fuller's earth, whiting, diatomaceous earth, powdered chalk, white molding plaster or talc. About one pound of prepared poultice material will cover one square foot. Do not use whiting or iron-type clays such as fuller's earth with acid chemicals. The reaction will cancel the effect of the poultice. A poultice can also be prepared using white cotton balls, white paper towels or gauze pad.

### Cleaning Agents or Chemicals

**Oil-Based Stains** - Poultice with baking soda and water OR one of the powdered poultice materials and mineral spirits.

**Organic Stains** - Poultice with one of the powdered poultice materials and 12% hydrogen peroxide solution OR use acetone instead of hydrogen peroxide.

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**Iron Stains** - Poultice with diatomaceous earth and a commercially available rust remover. Rust stains are particularly difficult to remove.

**Copper Stains** - Poultice with one of the powdered materials and ammonia. These stains are particularly difficult to remove.

**Biological Stains** - Poultice with diluted ammonia OR bleach OR hydrogen peroxide. DO NOT MIX AMMONIA AND BLEACH!

### Applying the Poultice

- Prepare the poultice. If using powder, mix the cleaning agent or chemical to a thick paste. If using paper, soak in the chemical and let drain. Don't let the liquid drip.
- Wet the stained area with distilled water.
- Apply the poultice to the stained area about 1/4" to 1/2" thick and extend the poultice beyond the stained area by about an inch. Use a wood or plastic scraper to spread the poultice.
- Cover the poultice with plastic and tape the edges to seal it.
- Allow the poultice to dry, usually about 24 to 48 hours. After, about 24 hours, remove the plastic and allow the poultice to continue to dry.
- Remove the poultice from the stain, rinse with distilled water and buff dry with a soft cloth. Use the wood or plastic scraper if necessary.
- Repeat the poultice application if the stain is not removed. It may take up to five applications for difficult stains.
- If the surface is etched by the chemical, apply polishing powder and buff with burlap or felt buffing pad to restore the surface.