

# Why Does Concrete Need Protection?

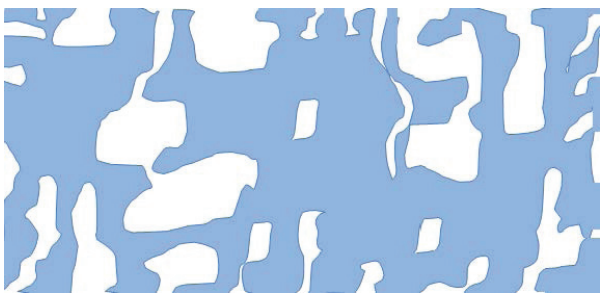
## Tech Talk

Stone, terrazzo, and concrete floors can be polished to a high gloss without the use of a coating. Many customers are tempted to stop at this point and save the cost of a protective coating. However, leaving a floor unprotected poses a serious risk to the long term appearance of the flooring substrate.

### A Close Look at Concrete:

All natural stone floors, terrazzo, and concrete are porous materials. This means that there are small holes, voids, cracks and other openings that liquids can penetrate. When a liquid penetrates into the floor, it has the potential to leave a stain which can be extremely difficult to remove.

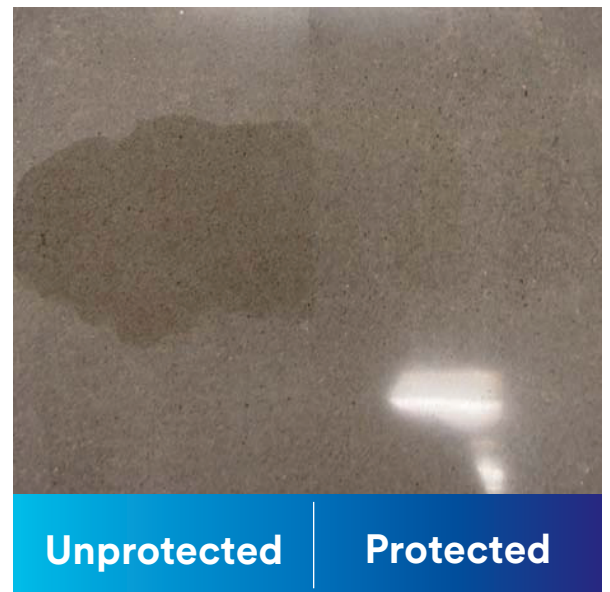
Close up a concrete surface would look something like this:



Where the white spaces are voids in the material which will allow liquid to penetrate.

### Water Penetration Test:

A good way to test the porosity of flooring is to do a water penetration test. Place a pool of water about 2-3 inches in diameter on the floor. Allow this water to dwell for about 2 minutes and wipe away. If a darkened spot has developed on the floor, the water has penetrated the surface. If no spot develops, the water has not penetrated the surface. If this water had been olive oil, there would already be a stain. Had the water been grape juice, the moisture would evaporate out and leave the colour behind, another stain. This is how quickly a stain can develop on an unprotected floor.



*The above picture shows the stain left from exposure of concrete to motor oil with a 20 minute dwell time. Note the protected side resisted the motor oil while the unprotected side resulted in a stain.*

# Why Does Concrete Need Protection?

---

## Products used for protection of concrete:

A wide variety of products are available for the protection of stone and concrete floors. The most common non-topical products are discussed briefly below:

**Densifiers** are applied to harden the surface of the floor and close up some of the pores by bonding with any free lime left in the surface of the concrete. These products offer limited stain protection.

**Impregnators** penetrate into the pores of a concrete or stone and line them with a material that makes it more difficult for a liquid to soak into the surface. They offer stain resistance but no wear protection.

**Penetrating sealers** function by soaking into the stone and filling the pores with product such that liquid cannot penetrate.

**Topical coatings** such as **epoxy** and **floor finish** provide a barrier layer between the floor and the liquids and prevent penetration. These products are prone to scratching and tend to take away from the natural look of stone, terrazzo, and concrete while requiring frequent maintenance to maintain appearance.

## How does this affect the use of Scotchgard™ Stone Floor Protector on a floor?

Scotchgard™ Stone Floor Protector acts as an impregnator to give stain protection, a densifier to harden the surface of the stone, and a topical coating to provide gloss enhancement and wear protection. Scotchgard™ Stone Floor Protector does all this while creating an easily repairable surface in the case of damage. No floor should be left without protection.



**3M Commercial Solutions Division**  
**3M Canada**  
P.O. Box 5757  
London, Ontario  
N6A 4T1  
[3M.ca/CommercialCleaning](http://3M.ca/CommercialCleaning)

3M, 3M Science. Applied to Life. and Scotchgard are trademarks of 3M. Used under license in Canada.  
© 2018, 3M. All rights reserved. 1804-11699 E BA-18-26130