

WINTERSTONE

Durability And Sealing of Outdoor Sculpture

The durability of **WINTERSTONE**, or any material such as stone, concrete, or metal, is its capacity for retaining its original shape, strength and appearance (patina) over a long period of time. Essentially, durability of an outdoor sculpture relates to *weathering* of the material. Rain, freeze/thaw conditions, and air pollutants are some of a sculpture's worst enemies, particularly with regards to surface deterioration. To maintain the integrity of the surface and its patina and substantially enhance its overall durability, the application of a sealer is highly recommended.

There is a wide range of sealer materials that offer varying degrees of protection to stone and cement products. Each has its own application, performance, characteristics and requirements. Sealers can be separated into two basic groups: **PENETRATING** sealers and **TOPICAL** sealers.

PENETRATING sealers become an integral part of the substrate so they cannot flake or peel off. They usually don't need to be re-applied for many years, if at all. Heat will not affect them, nor exposure to sunlight. They usually leave no surface sheen and do not change the natural look of the surface. One drawback of penetrating sealers (most of which are repellent-type) is that once they are applied, no other sealer except wax can be applied over them with any confidence. There are some water-based, penetrating-type sealers that can provide protection up to 10 years before re-application. A premium penetrating sealer also should possess excellent chemical resistance to acid rains as well as U.V. stability. It should also be "breathable" i.e. the ability to pass water vapour through the sealer so that moisture is not trapped below the surface. Trapped moisture in freezing temperatures can form subsurface ice (in the pores) that expands and eventually causes flaking of the sealer (spalling).

TOPICAL SEALERS will penetrate the surface to some degree (at least the initial application), but are usually designed to form a coating or film on the surface. Topical sealers may vary from very low to high sheen. Topical sealers are not permanent, and all varieties will eventually require re-application at some point, depending on the environmental exposure and the maintenance of the integrity of the surface/ patina desired.