## How do I care for my concrete in Winter?

You can help maintain concrete by shoveling the snow from your driveway, sidewalk and steps. By keeping the snow cleared, these is less chance that it will compact down freezing into the surface and accelerate the freeze/that cycle. The less number of times that water enters concrete and freezes, the less likely that it will become damaged. Use a plastic shovel instead of a metal one. Bent/sharp corners of a worn metal shovel can damage the surface of certain types of concrete.

## Is it okay to use salt as a deicer?

The short answer is NO. Salt is very corrosive to concrete and will eventually, if not immediately, cause damage to many types of concrete.

## What about "Environmentally Friendly" deicers?

There are four primary types of deicing salts that all have different characteristics and are each designed to work in certain temperature ranges.

1. The most common deicing salt is regular rock salt or sodium chloride. It is widely available and can melt snow and ice until the temperature drops below -8 C. Below these temperatures the rock salt stops melting snow and ice. Rock salt also releases the highest amount of chloride ions when it dissolves. Chloride can pollute water ways, rivers, lakes, and can also cause metal to corrode.
2. Calcium Chloride is another deicing salt that is commonly marketed in tiny white pellets. It can melt snow and ice well below -17 C. It can cause skin irritation if your hands are moist when using it and will chemically attack concrete.
3. Potassium Chloride is another deicing salt that is now available. It is not a skin irritant and will not harm vegetation but will only melt ice and snow when temperature is above -9 C.
4. The newest deicing salt is Magnesium Chloride. It will continue to melt snow and ice well below -25C. This salt releases about 40 percent less chloride into the environment than either rock salt or Calcium Chloride. It can be less damaging to concrete surfaces of unknown or questionable quality.

The common property of all different types of deicers is that they all seem to have the potential to damage concrete and some are harmful to the environment. Another potential problem with using a deicer of any kind is the damage caused by increased freeze/that cycles. For example, when a product rated for -9 C melts snow and ice, it will enter the pores of the concrete as salty water. When the temperature drops below the rated temperature for that particular salt it can refreeze and expand in the pores of the concrete causing damage. Many types of salt deicers are marketed as "Environmentally Friendly". Be careful when using these products and read the directions carefully.

One alternative to deicers is to spread sand or fine gravel on the surface. If there is a safety concern and you must use a deicer, remove the ice and residue with a shovel immediately after the product has melted the snow and ice. Alternatively if you find yourself in the situation where you must consistently use a deicer of some type, you will want to first protect the surface(s) with a salt resistant sealer. There

are many sealants available for all surfaces that will protect from the effects of caustic substances such as salt.  There are also sealants with grip additive built into them that can increase traction.