

De-Icing Salts and Their Affects on Your Concrete

Concrete driveways, walks, and patios enhance the appearance and value of your home and will provide many years of service with a minimum amount of maintenance.

As the first winter **snow** storm approaches, so does the need for the application of de-icing salts on the roads and highways and driveways and sidewalks. Even if you do not use de-icing salts, as you drive, your tires pick up the salt, then it is deposited onto your driveway as the snow melts. De-icing chemicals do a good job in dealing with the ice and snow from roads and walks, but they also can seriously damage concrete surfaces if you do not take simple precautions.

The problem with de-icing products is that most contain chemical compounds that can damage concrete or other materials with which they come in contact. Frequently used, de-icers are sodium chloride, calcium chloride and urea. Used in moderation, these do not usually harm concrete, but repeated use can create high concentrations that could damage concrete, metals, and even plants. Some de-icers contain ammonium nitrate, and ammonium sulfate. Their use should be strictly prohibited as they attack and disintegrate concrete.

The most common problem associated with the de-icing salts, is known as "Surface Scaling." Surface scaling is a condition that occurs when the surface of a hardened concrete slab breaks away to a depth of 1/16th (light) to 3/16th (severe) of an inch. This generally occurs within the first year of placement, but depending on the severity of the winter, this can also affect older driveways, and sidewalks.

Either a chemical or physical interaction with the concrete can cause de-icer scaling damage. Taking certain precautions can greatly reduce the damage potential and with regular maintenance.

- * **NEVER USE AMMONIUM NITRATE or AMMONIUM SULFATE DE-ICERS.**
- * **USE** sand or cat litter on driveways and walks instead of de-icers.
- * Select a de-icer that is least aggressive to concrete or metal.
- * Read and follow manufacturers' directions and cautionary statements.
- * Do **NOT** allow de-icer saturated melted ice to pond on the concrete surface.
- * When possible, after the weather clears, wash away any dried or residual de-icers from the concrete with clean water.
- * For added protection, and to extend the life of your concrete, coat the surface with a quality sealer every other year.

We have a lot invested in our homes, driveways and sidewalks. Concrete can last a lifetime if we take the time and care in selecting the proper products for each specific use.

Concrete Advisory Council of Hampton Roads

"We Pour It On"

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