

Icemelting

Why learn about icemelting options?

- Salt has been used during cold winter months to melt ice and snow for years. Much of this salt – or sodium chloride – enters our sewers, streams and rivers as run-off.
- Salt also seeps into the ground and accumulates in the aquifers that provide most of our drinking water. Over time, too much salt in groundwater can lead to bad tasting water. Removing salt from groundwater is complex and very costly.

Salt has an enormously negative effect on the environment around us. It is toxic to vegetation and damaging to the soil. It promotes high pH levels resulting in micronutrient deficiencies that reduce growth of crops and vegetation.



Niagara  Region

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The Natural Way for Niagara

What different types of icemelter are there?

With our environment deteriorating around us, many people are turning to alternative icemelers to meet their needs. Icemelters are available in pellets, granules, flakes or liquid – granules being the best format. Flaked forms don't penetrate as deep as granules, and therefore don't liquify beneath surface of ice, nor do they apply well in windy conditions.

There are basically 6 different types of icemelter compounds:

- Rock salt (sodium chloride)
- Magnesium chloride
- Urea
- Calcium chloride
- Potassium chloride
- Liquid alcohol

Some icemelers are simply variations of these basic types, blended with a non-icemelting additive for marketing purposes. Many products sold today are simply re-bagged commodities of rock salt, natural or artificially coloured.

Some icemelers contain potassium – a fundamental ingredient in fertilizers. Potassium is an essential and primary nutrient required by all plants. Tests have found that potassium, unlike sodium or salt, has no harmful effects to soil structure. In fact, potassium even has a counteracting effect to the impairments of salt, thus acting to repair damaged soil. Potassium can also be used where contamination of ground or surface water with sodium is of concern.

What is an icemelter actually supposed to do?

Icemelters help to remove ice by breaking it down, first into smaller chunks and finally into a liquid.

At what temperature are icemelers really necessary?

Snow and ice storms generally occur between the temperatures of -18° and 0° C (0° and $+32^{\circ}$ F). This is when icemelers will effectively melt ice and snow.

What type of icemelter should be used on new concrete?

No icemelter should be used on newly poured concrete, as this concrete requires a certain length of time to cure. It is best to not use icemelter on new or unsealed concrete less than 12 months old, exposed aggregate, brick, or precast steps. Applying icemelter to damaged, cracked or chipped concrete may result in further damage due to the thaw and re-freeze cycles.

Avoid using calcium chloride icemelter

- Discolouration of concrete
- Hygroscopic, meaning that it attracts or absorbs moisture
- Limited shelf life
- Leaves behind oily residue tracked into buildings, soiling and damaging carpets and flooring
- Very harmful on environment – damaging effect on plants, soil and water supply
- Causes irritation and painful burning to the skin