

## Buying, Using and Storing Salt (Feb. 2011)

Years ago during winter snow events our grandparents spread cinder and stove ash on the driveway and sidewalk and subsequently spent a lot of time mopping up what they tracked into the house. Today with the first sign of snow we rush to the store to pick up bags of rock salt and hope our house pets and landscapes are not affected. Today there are many brands and formulas, of rock salt leaving shoppers wondering which salt will for the job with the least damage.

Along with concern about house pet exposure and yard damage, there is the possibility of polluting nearby waterways, and its effectiveness in melting ice to begin with. Each salt has a different capacity to melt ice as the road surface temperature drops.

The following are recommendations for the four main product base materials currently on the market:

**Sodium Chloride** (effective to 15 degrees F) Caution needs to be taken with exposure to vehicles as it can corrode auto surfaces, cause minor pitting (holes) in concrete, is a water pollutant and can damage plants.

**Calcium Chloride** (effective to -20 degrees F) The same concern exists for corroding auto surfaces, damaging concrete and polluting water, however storage must be in a dry area (as it readily absorbs moisture), and can cost up to ten times more than Sodium Chloride.

**Magnesium Chloride** (effective to 0 degrees F) Water pollution and plant root burn are both a risk. This too must be stored in a dry area (readily absorbed by moisture) but it is not as corrosive to vehicles and concrete, and is not as problematic to pets.

**Calcium Magnesium Acetate** (effective down to 15 degrees F) It is less corrosive than rock salt, is biodegradable, less effective in colder temperatures, and it is up to thirty times more expensive than rock Sodium Chloride.

Snow that was so pretty in the first gentle coat soon becomes packed along the roadside, dirty grey with accumulated pollution, salt, and trash. This eventually melts and runs down the street into storm drains which funnel the water not to treatment plants but directly to streams, lakes and ponds. With it are carried pollutants such as lead, chlorides, copper, zinc, mercury, and plastics. Excessive road salting can damage landscape plants as salt washes into the soil and burns the root base. Trees such as red and sugar maples, Norway spruce, dogwood, and redbuds, for instance, are very sensitive to high chloride levels and can be stunted or killed by high levels of salt in the soil. High salt concentrations are found in lawn soil within five to ten feet of the blacktop and as far as one hundred feet from highways. Reduce damage with mulches on the soil surface around plants to absorb salts, and install salt-tolerant plants near paved/salted areas. For a free list, contact Cornell Cooperative Extension (see below).

Some light applications of road salt near grass and flower beds will usually not harm the plants if the salt is applied in mid-winter when the ground is frozen and the plants are dormant. Salt applications close to spring are much more damaging to plants that are beginning to wake from winter dormancy. So choose the right product, treat only the high risk areas and most of all make use of small doses that are applied just before ice begins to form.

*For further information, contact the Horticulture Diagnostic Lab at Cornell Cooperative Extension of Rockland at 845-429-7085 ext 3, weekdays. This information is provided by the County Stormwater Consortium through Cornell Cooperative Extension.*