

Smart Words for Smart Homeowners

THE EXPERIENCE OF EXPERTS AND THEIR ADVICE ON RELEVANT HOMEOWNER TOPICS

Melting Winter Ice

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There aren't many perfect solutions for melting ice. But there are more solutions than you thought. Some very bad, some very good. There are some messy alternatives like sand or even birdseed that, for a short time help traction. The sand granules and seed grains won't melt snow or ice, but they will give you some grip on icy surfaces. Kitty litter or wood ashes do not melt snow and ice and they get messy when the weather warms.



If you do use salt, use it sparingly and choose the kind wisely. Remember, the objective of any de-icer is to loosen ice and make it easier to shovel and move.

Freeze - Thaw Cycles

The use of deicing salts increases the amount of freeze-thaw cycles that a concrete sidewalk or driveway experiences. Water volume increases about 9% when it is ice. This expansion creates internal pressures that can blast apart weak brick and concrete. Ice is unforgiving.

Plant And Lawn Destruction

Keep in mind that Sodium Chloride (NaCl) may contain cyanide. Calcium Chloride (CaCl) is slightly better since less goes farther. But its run-off still increases algae growth, which clogs waterways. Potassium Chloride is another salt to avoid. Whatever you use, keep it away from landscape plants, especially those that are particularly salt-sensitive, like tulip poplars, maples, balsam firs, white pines, hemlock, Norway spruce, dogwood, redbud, rose bushes and spirea bushes.

Keep From Falling

Let's examine the ways we can keep from falling on the ice and damaging our concrete steps and walkways. We'll look at De-Icing salts and electrical heating "melt mats." We compare the ice melting methods of Sodium Chloride (Rock Salt), Calcium Chloride, Magnesium Chloride, Potassium Chloride, IceClear, Fertilizers (as deicing and traction agents), Heated Outdoor Mats & Runners. See the chart details on next page.

What Deicing Salt Does To Concrete

There are four kinds of deicing salts commonly used in winter for ice and snow removal. They run the gamut from caustic to kind. See the chart below. One thing to remember; the wrong one can destroy plants, brick and concrete.

Some deicing salts can cause severe damage to concrete and other building materials. Unless concrete has been specially formulated, mixed, prepared, installed, cured and finished properly do not use salts on it.



Heated Outdoor Mats

Depending on the size of your slip and slide problem you can buy ice melting mats from around \$100 to \$2500. They are as easy to use as any heating pad and do a very good job. A few names to consider are: HeatTrak Heated Doormat and Ice Away Automatic Snow Melt Mat.

De Icing Salts & Methods	Characteristics	Trade Offs
Sodium Chloride (Rock Salt)	Good to between 16° F & 20° F.	WILL RUIN Metal, Concrete and Brick. Chloride can pollute streams, rivers and lakes. The chloride also causes metal to corrode. Sodium Chloride (NaCl) may contain cyanide.
Calcium Chloride	Good to 0° F	Cause skin irritation if your hands are moist when using it. Concentrations of calcium chloride can chemically attack concrete.
Magnesium Chloride	Good to – minus 13° F	Releases about 40% less chlorides into the environment than either Sodium Chloride (rock salt) or Calcium Chloride. It is also less damaging to concrete surfaces of questionable or unknown quality. Magnesium Chloride is less toxic to plants, trees and shrubs. It also does not leave a powder residue when tracked into your home. Magnesium chloride corrodes certain metals over longer periods of time.
Potassium Chloride	Good to 15° F. When combined with other chemicals it can melt ice at lower temperatures.	It is not a skin irritant and does not harm vegetation.
IceClear	Lowest freezing point – minus 76° F	IceClear is less corrosive than distilled water. It will not harm metals, concrete or paving which will lead to a longer life for driveways, sidewalks, railings and fences. IceClear will not damage lawns, shrubs, or vegetation, so you can safely use it around expensive landscaping.
Fertilizers as deicing and traction agents	Differs	Those that contain ammonium nitrate and ammonium sulfate can rapidly disintegrate concrete. Don't take a chance if you don't know EXACTLY what is in the fertilizer.
Heated Outdoor mats & runners	All Temperatures	Worth Investigating as a convenience and an area alternative.

