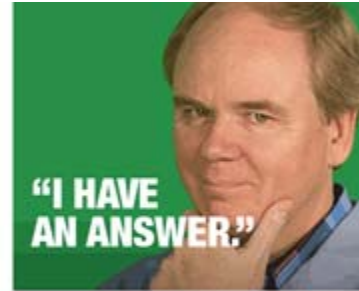


THANK YOU FOR SUBMITTING YOUR QUESTION...



Submit Your
Question Here

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A Cargill Deicing Technology Product

Your question:

Which sidewalk deicer provides the best protection for concrete and landscaping?

My answer:

I am afraid your quite straight forward question has a somewhat complex answer! There really is no obvious "best deicer" on concrete. All deicing chemicals can potentially damage concrete in different ways, depending on conditions and concrete quality. However, properly specified, produced, finished, and cured quality concrete is actually very resistant to damage by salt. Generally speaking, plain sodium chloride deicing salt can be used on good quality, properly air-entrained concrete with little risk of damage. For a more detailed answer to your question, please see the short video presentation I made on the topic here: <http://www.cargill.com/products/salt/winter/Ask-Dr-Scott/QuestionsAnswers/Safestdeicerstouseonconcrete/index.jsp>.

I am afraid the question of which deicer is best to protect landscape turf and vegetation is even less clear. There have been several studies of the effects of the commonly used deicing chemicals on various plants, trees, and turf, and the ranking of the relative toxicity of the different chemicals varies depending on the plant studied. A field test done by Iowa State University in the mid 1990's suggests that potassium chloride, calcium chloride, or a mix of urea and calcium chloride may be slightly less damaging to grass than salt (sodium chloride) in a narrow application rate range, but I think it is difficult to conclude this with high confidence because of the variability in the test results. One study found that calcium magnesium acetate was less damaging than salt to 17 out of 18 different tree species studied.

The sodium in standard sodium chloride rock salt can be damaging to soil structure if over-applied, while calcium and magnesium based deicers (such as calcium chloride, magnesium chloride, or calcium magnesium acetate) are relatively innocuous, and may even be beneficial, to soil structure. Given the currently available data, I don't think there is an obvious deicer that is safest to vegetation. Certainly any deicer will be damaging to vegetation if over-applied, so your best bet to protect landscape vegetation is probably to choose the appropriate chemical for the conditions (e.g. don't use plain salt at temperatures below 5 0F as it will be relatively ineffective) and try to use the smallest application rates necessary to remove snow and ice from the pavement.

Providing customers with deicing solutions that save lives, enhance commerce and reduce environmental impact.