



# Weatherwise

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# Cold Weather Di-Icer on Concrete Guidelines

"Cold weather has arrived, bringing the challenge of managing ice on concrete. Balancing quality and safety can be difficult, as some de-icers may compromise the concrete's surface. However, using de-icers is essential for preventing ice-related safety hazards. Please refer to the attached bulletin for steps to effectively manage both quality and safety without compromising either."

If you have any questions or comments about the use of salt or other materials to control ice, please contact the Quality Department.

## Issues using salt as a di-icer on concrete

1. Calcium chloride attacks aluminum/steel in or on concrete.
2. Salt-water expands at a much greater rate than just plain water. (9% for water & 16% by volume for salt water)
3. Any salt-water mixture will seep into the fresh concrete, which will create the spalling, scaling, or pitting.
4. Magnesium chemically bonds to concrete and causes spalling, scaling, or pitting, and reactivate itself after each cold cycle to draw more water in the salty solution.
5. Interior concrete does not have the concrete cover or the air-entrainment as exterior concrete, which means that interior concrete can not take the freeze/thaw pressures.
6. It usually takes at least 28 days for concrete to reach design strength, allowing water to seep into the hard troweled concrete finish.
7. Chloride mixture should never be within the concrete mixture or in the forms.
8. Fresh concrete will **NOT** melt ice. Ice must be removed prior to the pour!

## When and how to properly use a de-icer salt on your project

1. **Ideally, Don't use salt at all. Use sand.**  
*Sometimes, I know this is just not practical, so...*
2. When salt is used, find a product without magnesium, such as "Eco Melt"
3. Use salt sparingly. Do not broadcast the salt on a deck, only use on the areas directly affected by ice. **Once the ice melts, clean the slurry off the concrete.**
4. **Make sure that the salt mixture does not stay for any length of time on the concrete to allow it a chance to seep into the concrete.**
5. We need to make sure, checking twice, that there is no salt or salt-water on concrete when we will be pouring on top of it, such as a column or wall.
6. When ice is in a traffic route to a new concrete area to be poured, salt has a chance to get in the new area from shoes or sitting water in the forms. We need to get rid of the salt crystals or slurry quickly once the ice is melted and verify that salt has not entered into the new area or is sitting within the forms.

Do not use a weed burner on a slab or sidewalk to remove ice



Make sure we cover the tops of forms for walls & footings at the end of the day to protect from weather.



Urea is generally ineffective under 20°F and needs a large amount of material to work, polluting the environment