

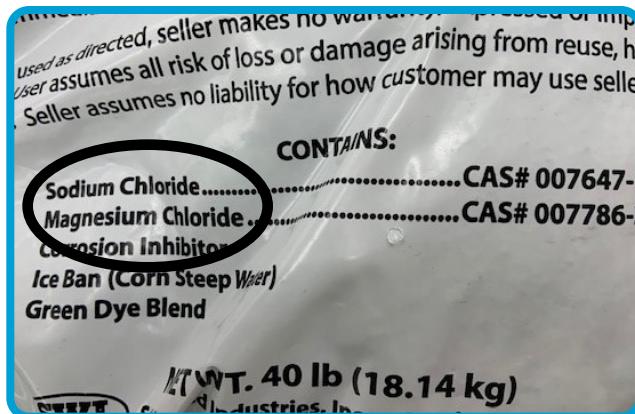


Homeowners Guide: Winter Salt Use



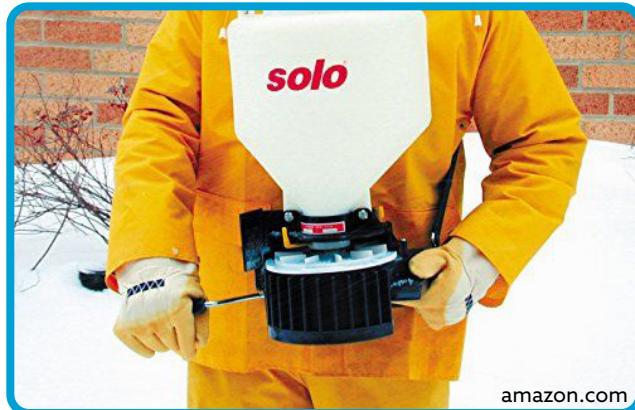
Street to Stream, No Treatment in Between

Many use salt to deice driveways, sidewalks and other surfaces for safety purposes. What you may not know is that the salt eventually washes off those surfaces into storm drains in your neighborhood that feed directly into local waterways without filtration. Deicers reduce the freezing point of water that converts snow and ice into a liquid. Most deicers contain chlorides that are harmful to the environment.



The Concern with Chlorides

Salts contain pollutants called chlorides. Once chlorides get into the soil and water they don't go away. They harm aquatic life, vegetation, soils, concrete and cause rust on vehicles. The most commonly used salt is sodium chloride, magnesium and calcium chlorides are used too. Monitoring conducted in Iowa and neighboring states has revealed elevated chloride levels in streams. Iowa's waterways are freshwater not saltwater.



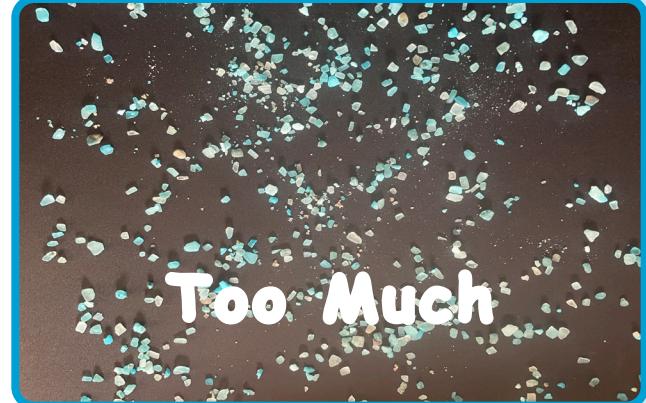
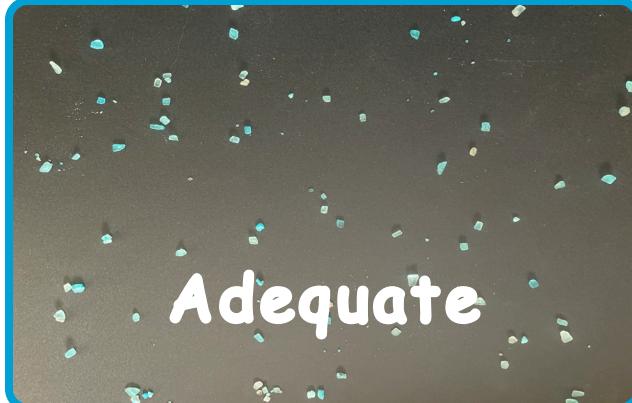
What You Can Do

- ✓ Shovel, plow, or snow blow first
- ✓ Only use what you need in critical areas, more is not always better
- ✓ Sweep off any dry excess product and place it back in the container
- ✓ Use a hand spreader to more evenly spread the salt, avoid using cup or handfuls of salt
- ✓ Know that the most commonly used salt, sodium chloride, is not effective at temperatures below 15°F
- ✓ Use sand for traction during freezing rain/ice events

Homeowners Guide: Winter Salt Use Continued



Know How Much to Use



According to Wisconsin's SaltWise Program, a 12 ounce coffee mug full of salt is enough to treat a 20-foot driveway or 10 sidewalk squares.

Try Anti-Icing Ahead of the Snow Storm Using Salt Brine

Anti-icing is adding salt brine to pavement surfaces before a snow storm. It breaks the bonds between snow and ice and the pavement surface. A salt brine can be made by adding 13 lb of salt in 5 gallons of water to make the recommended 23.3% salt brine solution (https://www.cti.uconn.edu/cti/Sustainable_Winter_Operations_Resources.asp). Mix the brine until all of the salt is dissolved.

It is recommended by University of Connecticut that a masonry sprayer be used to apply the liquid several hours before a storm. They recommend to start by applying about 0.25–0.5 gallons to a 10' x 50' area. Application rates should be adjusted based on experience. Spray in a row pattern with several inches of space between rows of spray. Don't over apply and cause slippery conditions. It is not recommended before freezing rain events.



Smart Salt Collaborative

Other Deicers

There are alternative products that contain acetates, formates and organic products derived from beets and corn. These deicers don't contain chlorides. They don't persist in the environment and biodegrade. However, they can potentially decrease oxygen concentrations if they reach waterbodies. Some of the impacts may be reduced if the stormwater runoff is held in a basin or filtered through a stormwater practice. They generally are less corrosive and have less impact on vegetation.

Additional Resources

<https://www.wisaltwise.com/Partner-Resources>

https://www.cti.uconn.edu/cti/Sustainable_Winter_Operations_Resources.asp

<https://www.pca.state.mn.us/sites/default/files/p-tr1-11.pdf>

<https://www.iwla.org/water/stream-monitoring/salt-watch>