

Chemical De-Icing Facts

Winter weather and cold temperatures creates the perfect condition for road ice on Kitsap County roads. Sand has always been an effective tool to help improve traction, but it too has limitations. Sand gets picked up by tires and blown to the side of the road, decreasing its effectiveness on high-volume roadways. Sand clogs roadways drains, and can impact aquatic life in streams. Maintenance cost for sand, both when it's applied, and when it's removed after the storm, are high and a very labor intensive operation.

This year we've added another tool to our toolbox. Chemical deicers lower the freezing point of water, allowing lower temperature before ice forms on roads. Like sand, the initial application is to hills, curves, and bridges on major arterials and lifeline routes. Chemical application does not guarantee ice-free roadways, but is one more tool we can use to keep roads safer. Motorists have valid concerns regarding chemicals on the road, and many have stories about how chemicals affected their cars when they lived back east. The following are the most common questions we hear about chemical deicers.

What kind of liquid chemicals does Kitsap County use to treat roads?

Kitsap County uses a chloride (salt) brine diluted with water to 23.3% sodium chloride. Sodium chloride is the safest and most cost-effective anti-icing product available.

Is salt corrosive? Will it damage my vehicle?

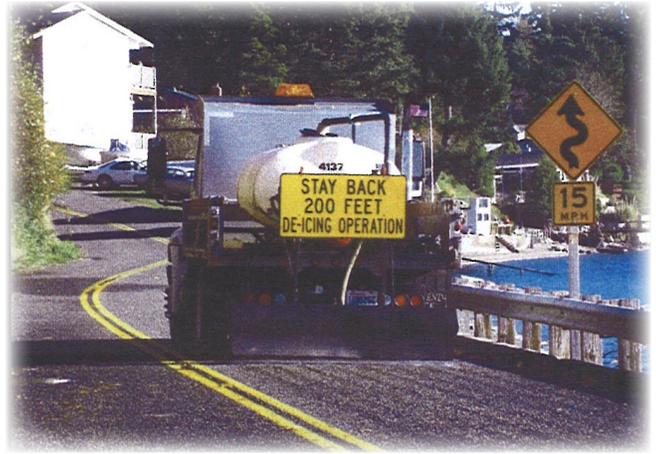
All chloride products used for anti-icing can be corrosive. Western Washington experiences relatively mild and brief winter storms that reduce the amount of salt used over the course of the winter. Most of our winter storms are followed by rain, washing salt off the road and minimizing the opportunity for corrosion. Vehicle manufacturing techniques have evolved over the years and many new vehicles use plastic, fiberglass, stainless steel and other material less prone to corrosion than steel. It is recommended that you wash your car periodically in the winter to remove any chemical residue. Many commercial car washes have underbody wash cycles which helps remove salt from your vehicle. **Always stay at least 200 feet behind trucks when they are applying the salt-brine mixture.**

Aren't there other anti-icing products less corrosive than salt?

There are some products that are known to be less corrosive in areas where salt is used frequently and for long periods during winter weather. A Washington State Department of Transportation multi-year study showed that in Washington's wet climate there is little to no difference in corrosion caused by salt when compared to other ice-inhibiting products. Another consideration is cost. Chloride products that include corrosion inhibitors are two to three times more expensive than the salt brine mixture used by Kitsap County.

Will the salt put on roads hurt the environment?

The volume of anti-icing products needed to manage road ice in the Pacific Northwest is low. Because of this environmental impact is considered minimal. The Washington State Transportation Center and Washington State University conducted a thorough scientific study regarding the effect of chloride anti-icing products on the environment. The study looked at a stretch of State Route 97 near Leavenworth, located near Peshastin Creek, a known fish-bearing stream. High volumes of chloride products are used on that stretch of road to prevent ice on the road surface. The results of the study indicated that the application of chloride products had no measurable impact on Peshastin Creek. See details at www.wsdot.wa.gov/research/reports/fullreports/500.1.pdf.



The following are the most common questions we hear about chemical deicers.

Prepare your vehicle for winter driving!

Keeping your vehicle in top operating condition is important year-round for safety and for fuel economy. It is especially important to be prepared in winter and avoid unpleasant and dangerous situations that can happen on snowy and icy roads. Get your vehicle ready for winter by checking these items:

- | | |
|------------------------------------------|--------------------------------------------------|
| <input type="checkbox"/> Ignition system | <input type="checkbox"/> Fuel system |
| <input type="checkbox"/> Fluid levels | <input type="checkbox"/> Brakes |
| <input type="checkbox"/> Wiper blades | <input type="checkbox"/> Windshield washer fluid |
| <input type="checkbox"/> Snow tires | <input type="checkbox"/> Tire tread and pressure |
| <input type="checkbox"/> Defroster | <input type="checkbox"/> Proper grade oil |
| <input type="checkbox"/> Cooling system | <input type="checkbox"/> Exhaust system |
| <input type="checkbox"/> Battery | <input type="checkbox"/> Lights |
| <input type="checkbox"/> Battery | <input type="checkbox"/> Antifreeze |

Here are some other important tips to prepare for winter driving. Keep these in mind each time you drive in winter weather.

- Always fill the tank before heading to open country, even for a short distance. Fill the tank long before it begins to run low. Keep your tank as full as possible to minimize condensation and provide fuel in case of trouble.
- A citizens band (CB) radio and/or cellular phone is useful to you and other stranded motorists in an emergency.
- Keep headlights on, even during the day.
- Stock your car with an ice scraper and brush, small shovel, jumper cables, tow chain and a bag of sand or cat litter for tire traction.
- Include road flares, a blanket, heavy boots, warm clothing, and flashlight with batteries.



Kitsap County Public Works

For complete information about snow plowing and ice removal visit

<http://www.kitsapgov.com/pw/snowplow.htm>

360-337-5777 or www.kitsapgov.com/pw or email help@kitsap1.com

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