

WINTER WEATHER TOOLS

Sodium Chloride, Calcium Chloride, Abrasives – What’s the Difference?

The Virginia Department of Transportation applies several materials to state roads to assist with snow removal or to improve vehicle traction.

Sodium Chloride – For snow and ice control, sodium chloride – or salt – is the most plentiful and inexpensive de-icer. It is mined as rock salt or distilled from seawater.

When salt is applied to a pavement, it creates brine, which keeps snow and ice from bonding to the surface. Salt is effective to temperatures of about 27 degrees Fahrenheit and above.

Calcium Chloride – An expensive de-icing chemical, calcium chloride most often is mixed with salt to provide some moisture so the chemical reaction causing melting can take place. It is used when temperatures fall into the low 20s, because at those temperatures, moisture isn’t present to help salt start the melting process.

In liquid form, calcium chloride provides quicker melting.

Abrasives – Small gravel or sand that can’t melt snow or ice. Often, abrasives are mixed with salt to provide additional traction and reduce the cost of applying chemicals.

Abrasives can be used on roads generally not treated with chemicals.

De-icing chemicals such as salt and calcium chloride are very detrimental to gravel-surfaced and surface-treated roads (those with a salt-and-pepper appearance).

Chemicals are used very sparingly on these types of roads and only when absolutely necessary.