

SODIUM CHLORIDE, CALCIUM CHLORIDE, ABRASIVES

How They Differ

The Virginia Department of Transportation (VDOT) applies several different materials to roads to help remove snow and improve vehicle traction.

Sodium Chloride: For snow and ice control, sodium chloride – or salt – is the most plentiful and inexpensive de-icing material.

It is mined as rock salt or distilled from seawater.

When salt is applied to the road, it creates brine, which keeps snow and ice from bonding to the pavement.

Salt is most effective to temperatures of about 27 degrees Fahrenheit and above.

Calcium Chloride: An expensive de-icing chemical, calcium chloride is most often 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. At those temperatures, moisture isn't present to help salt start the melting process.

In liquid form, calcium chloride provides quicker melting action.

Abrasives – Small gravel or sand that cannot 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 pavements with a salt-and-pepper appearance).

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