



The Science of Winter Road Treatments



pennsylvania
DEPARTMENT OF TRANSPORTATION

Winter road treatment tactics depend on **temperature, precipitation type** and **traffic volume**. Salt isn't a silver bullet and may not be effective on every roadway.

The Basics

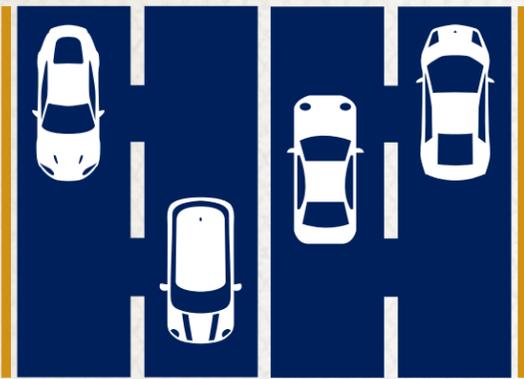


Less effective below 23-25 degrees

Most effective when crushed/spread by traffic

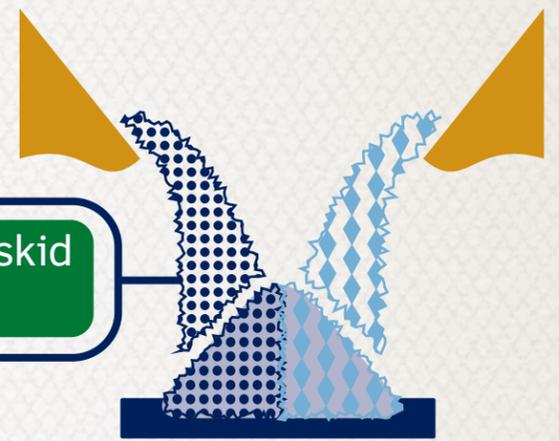


Salt Use and Road Types



Most effective with more traffic

Mixed with anti-skid or only anti-skid used on lower-traffic roads



When traffic is too low for salt to be effective, salt or salt/anti-skid mix is focused on hills, intersections sharp curves or freezing-prone areas

Salt and Temperature



Pre-wetting salt with salt brine can jump start melting, but is still most effective when pavement is 25 degrees or higher



On high-traffic roads, salt/anti-skid mix can be used when the road temperature is below 15 degrees



On low-traffic roads when the road temperature is below 15 degrees, falling snow is generally dryer and blows over the roadway, so salt is generally not used