

# GETTING THE FACTS ABOUT SALT BRINE



## WHAT IS SALT BRINE?

Salt brine is water saturated with sodium chloride, or more simply rock salt dissolved in water. It is part of MaineDOT's anti-icing program to take a proactive approach to controlling snow and ice on Maine's highways.

## WHEN IS SALT BRINE USED?

Salt brine is best used when pre-treating the road in anticipation of frost or winter storms. Salt brine can prevent frost on the road for up to three days. If applied just before a winter storm, salt brine will begin working as soon as the first snowflake falls and will delay the accumulation of ice and snow on the pavement.

## WHAT ARE SOME OTHER BENEFITS OF SALT BRINE?

Once a winter storm is in progress, salt brine is sprayed onto the rock salt, as it is applied, to accelerate the melting of ice and snow. This is known as "pre-wetting". Pre-wetted rock salt stays on the pavement instead of bouncing off the roadway and wasting material.



Pre-wetting with salt brine in this manner reduces the amount of rock salt that MaineDOT must use overall.

Salt brine costs much less than other liquid chlorides – up to 10 times less per gallon!

Salt brine allows MaineDOT crews to be proactive and get a jump-start on the storm. This means that MaineDOT crews can treat the roads before the driving conditions decline and they can have entire routes pre-treated so that the ice and snow never has a chance to bond to the pavement. This means the roads will return to bare pavement much quicker once the storm has ended.

## HOW IS SALT BRINE APPLIED TO THE ROAD?

Motorists can expect to see MaineDOT crews pre-treating the roads with salt brine using specially modified tanker trucks, trailers, or units that slide into the back of a typical plow truck. Most of this equipment is capable of spreading salt brine over one, two, or three lanes of pavement.

## HOW DOES SALT BRINE FIT INTO MaineDOT's ANTI-ICING APPROACH?

MaineDOT's proactive use of salt brine is twofold:

First, salt brine is used on roads and bridges prior to a storm to

delay ice and snow from sticking to the roadway.

Second, salt brine sprayed on rock salt is used in plowing to fight the buildup of ice and snow throughout the storm.



## WHAT SHOULD I DO WHEN FOLLOWING A VEHICLE APPLYING SALT BRINE?

Vehicles applying salt brine usually travel at speeds of less than 40 miles per hour. Motorists should stay back at least 100 feet from the back of the vehicle.

## WHEN DOES MaineDOT USE OTHER LIQUID CHLORIDES?

The effectiveness of rock salt and salt brine decreases as the temperature drops. Therefore, as storms become colder (low 20s and below), snow fighters must use chemicals that work at lower temperatures to supplement the rock salt. Liquid calcium or magnesium chlorides are the most common options and are applied directly to the rock salt during the storm in the same manner as the salt brine is in warmer storms.