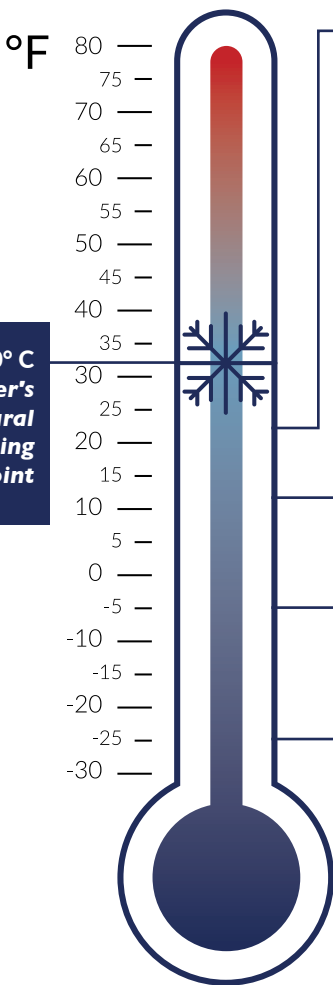


CHLORIDES ARE MAGIC

The primary goal of any deicing product is to reduce the freezing point of water and form a brine solution. Most freezing point depressants belong to a family of chlorides. Chlorides lower the freezing point of water. If you have a mix of complex chlorides, the magic of your melting power increases.



32° F/0° C
Water's
Natural
Freezing
Point

SODIUM CHLORIDE

Sodium Chloride, white salt, lowers water's freezing point to about 20° F/-6° C. Compared to other materials, it has limited effectiveness in very cold temperatures. It will not melt ice at temperatures below 20°F.

POTASSIUM CHLORIDE

Potassium Chloride is often perceived as a safe product to use around vegetation. It has a slower activation rate than calcium chloride, and lowers the freeze point of water to about 12° F. -11° C.

MAGNESIUM CHLORIDE

Magnesium Chloride is much less corrosive than sodium chloride. Magnesium Chloride lowers water's freezing point to about -5°F/-15° C. It starts melting about as fast as calcium chloride, but also dilutes more quickly. **Ice Slicer naturally contains the equivalent of 4.18 gallons of MgCl per ton.**

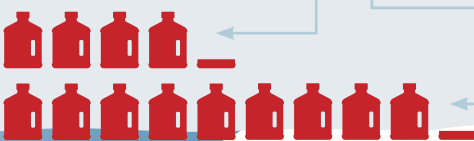
CALCIUM CHLORIDE

As calcium chloride dissolves, it gives off heat. Technically, it's exothermic. In addition, it holds and absorbs additional moisture for an extended time to resist evaporation. As it does this, Calcium Chloride lowers the freezing point of water to about -25°F/-32°C. **Ice Slicer naturally contains the equivalent of 9.11 gallons of CaCl per ton.**

HOW TO DUPLICATE

Ice Slicer's Chloride Power

- 1) Add 4.18 Gallons of MgCl per ton (extra \$\$)
- 2) Add 9.11 gallons of CaCl per ton (extra \$\$)
- 3) Obtain/build additional infrastructure to house additives (extra \$\$)
- 3) Prepare for leaching. White salt cannot fully absorb that quantity of liquids (loss of extra \$\$)



WHY DOES GRADATION MATTER?

Ice Slicer's naturally diverse gradation provides the fastest stabilizing traction on winter roads. Our unique deicing product aggressively cuts through ice and snow to restore safe driving conditions hours faster than the competition.

ICE PENETRATION

Large, coarse granules vertically penetrate ice and snow while fine granules melt quickly to form brine.

REDUCE BOUNCE & SCATTER

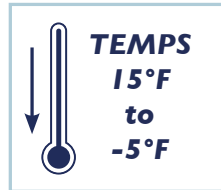
Gradation variety helps deicing materials stay on the road better.

MELT FASTER LAST LONGER

Fine Granules melt quickly and form brine while large granules break down slowly and prevent refreezing.

WE LIKE TO CREATE FRICTION

Independent Grip Study • Fargo, ND • Vaisala Sensors • 01.03.15
Ice Slicer vs Treated White Salt



- Ice Slicer was applied once at 300 lbs/lane mile
- Treated white salt was applied three times for a total of 500 lbs/lane mile with 2.5 gallons of brine
- The road treated with Ice Slicer recovered to acceptable grip levels **3.5 hours faster** than the white salt.

Ice Slicer had superior results and required 40% less material

