



The Importance of Sugar

BEET HEET® Concentrate (BHC) contains significantly more sugar than any organic/chloride deicer in North America. When it comes to enhancing the deicing and anti-icing performance of rock salt and sodium chloride brine, the benefits of adding sugar are far reaching and significantly more important than many snowfighters realize. Here are several performance enhancing benefits that the sugars in BHC provide when BHC is added to rock salt and brine in meaningful levels.

1. The sugars in BHC suppress the freeze point of rock salt and brine.
2. The sugars in BHC lower the effective working temperature of rock salt and brine.
3. The sugars in BHC increase the ice melt capacity of rock salt and brine.
4. The sugars in BHC significantly reduce the corrosion value of rock salt and brine.
5. The sugars in BHC act as cryoprotectants. Cryoprotectants slow down the rate at which melted snow and ice refreeze. This is a huge benefit because most roadway surfaces deicers are applied to are crowned. Slowing down the rate of refreeze allows much more melted snow and ice to run off the road surface before it refreezes.
6. Cryoprotectants also inhibit the formation of ice crystals. Deicers and anti-icers containing sugar at meaningful levels are significantly more effective at preventing frost and ice formations.
7. The sugars in BHC significantly strengthen & extend the anti-bonding characteristics of rock salt and NaCl brine. This is huge considering the costs of chiseling and melting off bonded precipitation verses the costs of peeling off un-bonded precipitation.
8. The sugars in BHC significantly strengthen and extend the residual effect of rock salt and NaCl brine. In fact, just the leftover residue from BHC treated rock salt acts as an effective anti-icer at the next snow event.
9. The sugars in BHC act as a tackifier. Pre-wetting rock salt with a heavy, sticky tackifier reduces bounce and scatter loss far more than pre-wetting agents containing little to no sugar. When it comes to anti-icing, the longer an anti-icer is held in the target area, the more ice it will melt in the target area. Anti-icers with little to no sugar quickly dilute out and are washed away, or they dry up and blow away.
10. The dark sugars in BHC darken rock salt and brine which increases their ability to absorb heat in the form of solar radiation. If they absorb heat, they're also emitting heat, which significantly improves their ice melting capacity. Even on cloudy days about 50% of the sun's radiation reaches the earth's surface. Clear deicers like 32% CaCl₂, 23.3% NaCl brine and deicers containing corn syrup do not have this transforming ability.