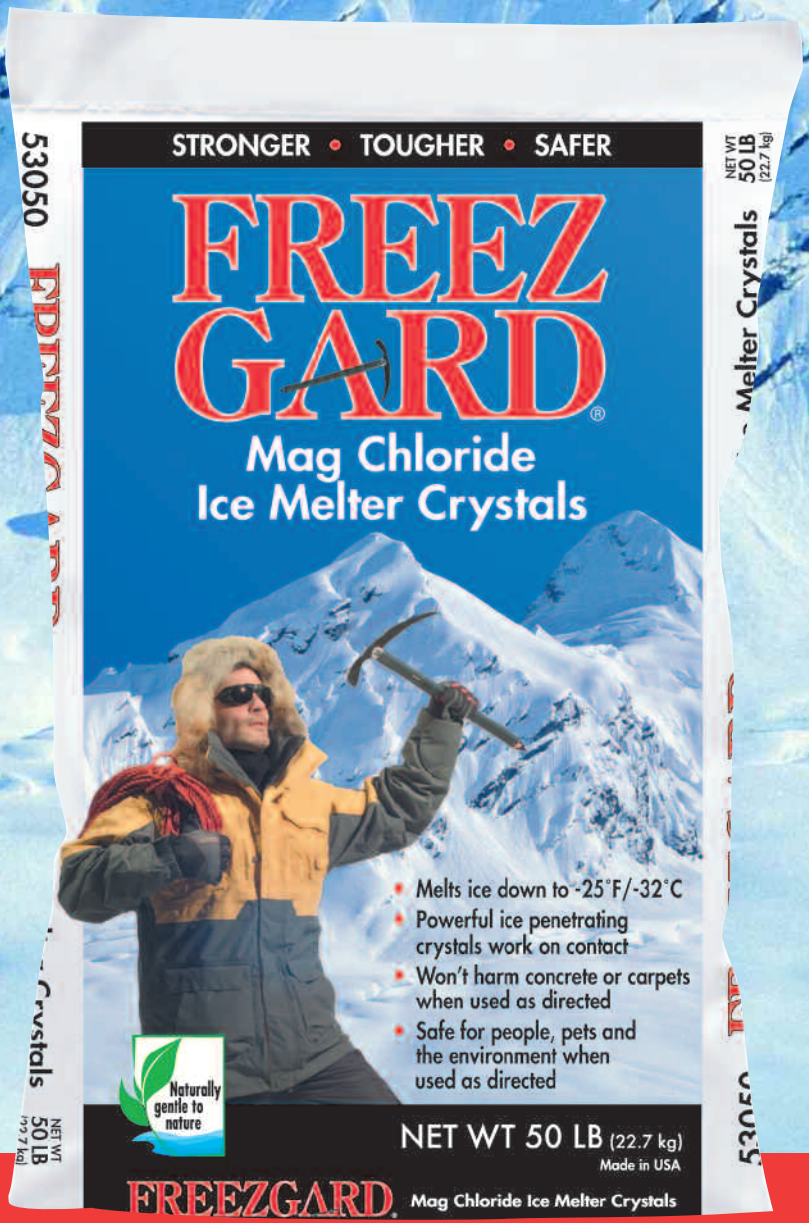
FREEZGARD®

Mag Chloride Ice Melter Crystals



Stronger, Tougher, Safer Ice Melting Performance

FreezGard®.
The performance and safety you need with the environmental friendliness everybody wants.

With FreezGard you don't have to sacrifice performance to get an ice melter that's safe to use and gentle to the environment. FreezGard has it all.

FreezGard's unique and powerful ice penetrating crystals rapidly melt ice and snow, even in extremely cold temperatures as low as -25˚F/-32˚C. FreezGard is also safer for people and animals, safer to the environment, and gentler on concrete and metal than other ice melters when used as directed.

North American Salt Company manufacturers FreezGard in the USA from magnesium chloride that is naturally solar evaporated from the Great Salt Lake. Plus, we have made significant investments in production capacity and distribution to maintain reliable supplies all winter long. Altogether, FreezGard is the complete ice melter in every way.

STRONGER • TOUGHER • SAFER

FREEZGARD®

Mag Chloride Ice Melter Crystals

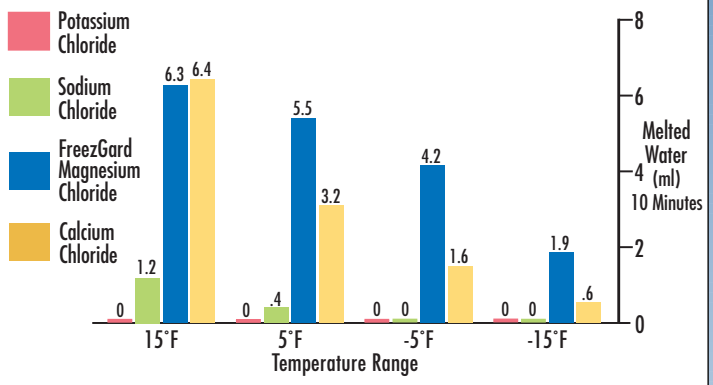
Powerful

Works fast, works hard, works long.

FreezGard crystals begin working on contact and dissolve quickly, creating a powerful, long lasting brine solution. In fact, FreezGard is hygroscopic, so it attracts moisture faster, melting more ice and snow than other ice melters.

The two most important considerations when comparing ice melter performance are melting speed and the amount of melted water produced. The graph shows that 10 minutes after applied, FreezGard produced more milliliters of melted water than potassium chloride, sodium chloride, and calcium chloride. In fact, no matter how cold it got, FreezGard outperformed its competition. Plus, FreezGard is safer on concrete, metal and skin, and also safer for animals and vegetation – clearly making it the better ice melting choice.

Ice Melt Effectiveness (20 Minutes)



Effect of Shape

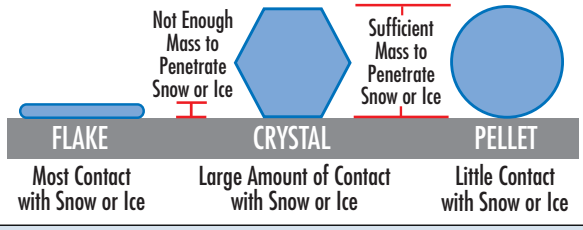
FreezGard's crystal shape means optimum performance.

Ice melters come in three basic shapes: pellets, flakes and crystals. Their performance is affected by two factors: surface area, which determines the amount of contact with snow and ice; and relative mass, which determines how well the ice melter is pulled down through ice and snow.

Pellets have mass but little surface area. Flakes have a large surface area but little mass. However, FreezGard crystals have the optimum combination of surface area and mass to penetrate ice and snow and dissolve quickly for rapid melting action.

FreezGard's unique crystal shape also reduces the amount of scatter when applied. Pellets tend to roll, and flakes tend to blow away. But laboratory tests have shown that crystals stay on the spot and on the job. So with FreezGard you get the optimum combination of ice penetration and scatter control.

Ice Melt Shape Comparison



Performance

FreezGard delivers all the cold-temperature performance you'll need.

Ice melters are often compared by their eutectic melting temperatures and effective melting temperatures (EMT). Eutectic temperature is the lowest temperature at which an ice melter will melt under laboratory controlled conditions measured by standardized American Society of Testing Materials (ASTM) procedure. EMT is the lowest temperature at which an ice melter will melt under real-world conditions.

Eutectic temperature is the most accurate measurement of performance because there are many factors that can affect the EMT such as wind, humidity and sunlight. With FreezGard's eutectic temperature of -25˚F/-32˚C, you'll probably never need to melt ice and snow at colder temperatures. So choose FreezGard for extreme cold-temperature performance that's safer for people, animals and the environment, without the negative effects of calcium chloride.

Eutectic & Effective Melting Temperatures of Common Ice Melter Ingredients

Ingredients	Eutectic Temperature	Effective Melting Temperature (EMT)
Calcium Chloride	-55˚F / -48˚C	-25˚F / -32˚C
FreezGard Magnesium Chloride	-25˚F / -32˚C	-15˚F / -26˚C
Sodium Chloride	-6˚F / -21˚C	5˚F / -15˚C
Potassium Chloride	15˚F / -9˚C	20˚F / -7˚C
Urea	11˚F / -12˚C	25˚F / -4˚C

Data from the ASTM Freezing Point Test (ASTM D1177-88).

Toxicity

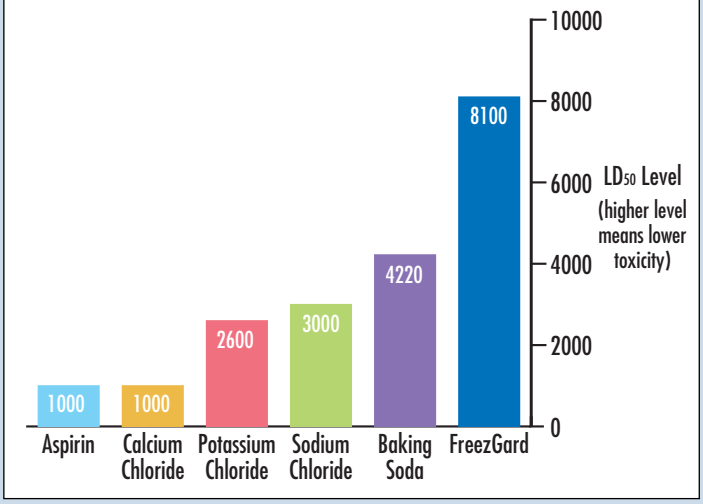
Safe to handle – Safe around people and animals too.

FreezGard is safe for use around people and animals. In fact, it's less toxic than baking soda or table salt (sodium chloride). FreezGard is also less toxic than other common ice melting chemicals, including calcium chloride, potassium chloride and sodium chloride.

Unlike calcium chloride, when applied properly, FreezGard is safer to handle and gentler on skin. Some ice melters recommend using masks, gloves or goggles when applying. But FreezGard requires no protective equipment. And FreezGard is also safe for animals because it won't harm their paws.

Data acquired from the US Department of Health & Human Services. Toxicity is measured by a chemical's LD_{50} (Lethal Dose 50%) level. The higher the LD_{50} level the lower the toxicity.

Lower Chemical Toxicity Rate



Concrete

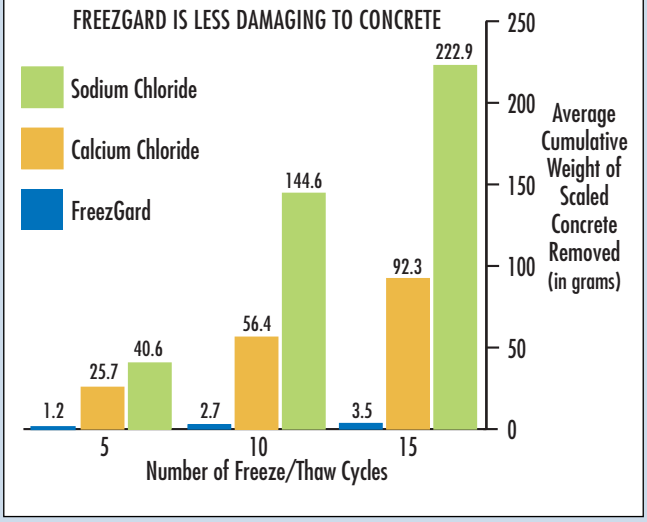
A smarter choice for use around concrete.

When water seeps into cracks and pores in concrete, it freezes and expands. Over time the stress of these repeated freeze/thaw cycles can cause concrete to crack, scale and spall. Ice melters can contribute to this process, so choosing the right product is important to protect sidewalks, driveways, curbs and parking areas.

According to concrete manufacturers, calcium chloride can chemically attack concrete. Calcium chloride also refreezes quickly, making concrete susceptible to the freeze/thaw cycle. The good news is that research by the Strategic Highway Research Program (SHRP) shows that the same magnesium chloride used for FreezGard is less damaging to concrete than other ice melters. And independent testing of magnesium chloride, calcium chloride and sodium chloride, using SHRP test methods, shows that after 15 freeze/thaw cycles, sodium chloride resulted in 63 times and calcium chloride resulted in 26 times more grams of concrete lost to spalling than magnesium chloride.

Clearly, FreezGard is a smarter choice for any concrete areas where you use ice melter.

Concrete Spalling Comparison



Data from Strategic Highway Research Program, "Handbook of Test Methods for Evaluating Chemical Deicers," SHRP H-205.8 using a 3% solution; November 1992.

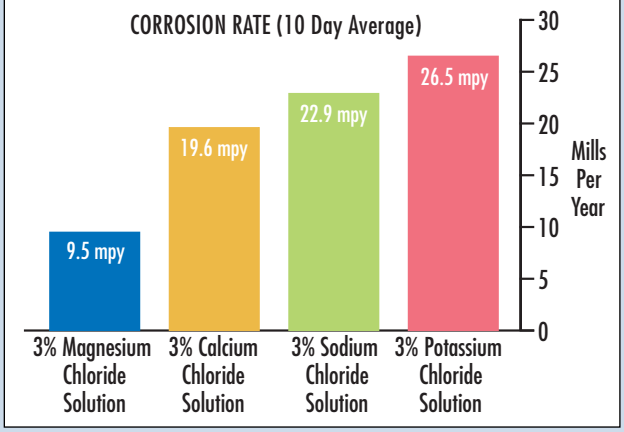
Metal

Less damaging to metal than other ice melters.

FreezGard, 100% magnesium chloride hexahydrate, is less corrosive to metal than other common ice melters – even 50% less corrosive than calcium chloride. With FreezGard you're helping control the potential effects of ice melter on concrete rebar, piping, automobiles and other steel with which it comes into contact.

The procedures followed were in accord with NACE Standard TM0169-76 "Standard Test Method", "Laboratory Corrosion Testing of Metals for the Process Industries". Performed by Charles H. Pitt, Ph.D., P.E.; Professor of Metallurgy; University of Utah; November 30, 1994.

Less Corrosive on Metal



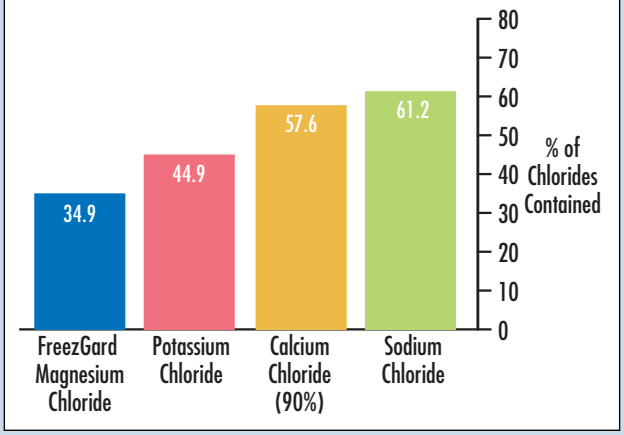
Chlorides

FreezGard is a wise choice for the environment.

The chart below shows that pound for pound, FreezGard contains the least amount of chlorides compared to the ice melter ingredients. In fact, FreezGard has one-third fewer chlorides than calcium chloride and sodium chloride. This means less chloride runoff and pollution into our streams, lakes and rivers.

Chlorides in excess can also damage plants, causing leaf burn and root toxicity. Calcium chloride can damage or even kill vegetation. However, according to an Iowa State Turfgrass Study, FreezGard is less harmful to vegetation than other ice melters. Additional research by the University of Wisconsin shows that FreezGard has the least impact on turf color and quality than other common ice melters. You can use FreezGard with confidence, knowing that a form of magnesium chloride is so safe that it's used as a fertilizer.

Lower Chloride Content



Natural Choice

Made in the USA the environmentally friendly way.

The magnesium chloride used for FreezGard is naturally extracted from Utah's Great Salt Lake. Our solar evaporation process harnesses the power of the sun and gravity to evaporate 100,000 gallons of water each minute during the summer. This water is then pumped into a series of evaporation ponds covering 35,000 acres. Traditional production methods used to produce other ice melters would require 7,000,000 tons of coal in a single year. But our production process is natural and environmentally friendly.

Cleans up is easy with no messy and potentially hazardous residue.

Some ice melters leave a stubborn residue that can damage floor surfaces and resists cleaning. But when used as directed, FreezGard won't leave a slick, oily residue that can stain carpets and floors or pose a slippery hazard. Plus, if FreezGard gets tracked indoors, it cleans up easily with mop and water.

FreezGard is your total ice melting solution.

Comparing ice melters used to be confusing. But with FreezGard, making the right choice is easy, because FreezGard is everything an ice melter should be:

- Fast, strong and long-lasting melting action
- Unique crystal shape for optimum performance
- Safe to handle and safe around people and animals
- Safer on concrete and metal than other ice melters
- Environmentally friendly and made in the USA
- Fast and easy cleanup

North American
Salt Company
9900 West 109th Street
Overland Park, KS 66210
1-877-462-7258
www.nasalt.com