



## RIGHT CHOICES REQUIRE

## GOOD INFORMATION



### 5 QUESTIONS TO ASK ABOUT ANY ICE MELTER

What's in an ice melter package shouldn't be a mystery. To make good decisions, you need to know things such as minimum ice melt temperatures, as well as melting ingredients and their capabilities.

While we, the producers of Diamond Crystal® salt, address five basic questions in this brochure, we feel the most important information should also be included on product packaging. Additional information should be easily accessible at a manufacturer's website and in their product literature. If not, you don't know what you're buying—or what outcome to expect.

Ultimately, the bottom line of ice melting is to increase safety by reducing the chance of slipping and falling on sidewalks, driveways and parking lots. To that end, we hope this brochure helps you choose the right product for your conditions.

We stand behind our products while continually seeking to improve ice melting performance. As always, we welcome your questions and comments in the mutual aim to increase safety.

## QUESTION ONE



**What's the effective melting temperature of the product?**



Ice melting progressively decreases as temperature drops until it reaches the theoretical "eutectic" temperature, the point at which an ice melter approaches zero ice melting. This eutectic temperature is lower than the temperature at which a user can expect effective melting under wintry conditions. A product's effective melting temperature is what users need to know from ice melt manufacturers.




**We base our performance claims on actual, measurable ice melting capacities using a standard industry test method, and highlight that temperature on the front of each product bag.**

## QUESTION TWO

**Q** What are the ice melting ingredients in the package?


**A** Magnesium chloride and calcium chloride are ingredients that melt ice below zero degrees Fahrenheit (-18°C). Sodium chloride (salt) melts effectively down to +5°F (-15°C), while calcium magnesium acetate and fertilizer ingredients such as urea and potassium chloride don't melt effectively below +10° F (-12°C). If ingredients are not disclosed on the packaging, the user has good reason to question the product's ice melt claims.

 **We disclose ingredients for all our Diamond Crystal® ice melters on product packaging, Cargill salt and Diamond Crystal® salt websites, and in supporting literature.**

## QUESTION THREE

**Q** In blended products, how much of each ice melting ingredient is enough?


**A** Blended ice melters include a mix of ingredients designed to provide complementary action, such as lowering the melting temperature, or inhibiting environmental injury or corrosion. However, there must be a sufficient amount of any ingredient to achieve measurable results. Independent lab analyses and industry studies show that trace amounts of ingredients are insufficient to achieve additional ice melting or, for that matter, environmental protection. If the percentages of ingredients are not listed on product packaging, the user should question performance claims, since there may be too little ingredient to make an effective difference.

 **For that reason, we also list our percentages of ingredients on our new product packaging, websites and in supporting literature.**

## QUESTION FOUR

**Q** What substantiation is there for product claims?


**A** In today's crowded ice melter environment, buyers seek and need more data and supporting evidence to make the correct and best ice melter decisions. SHRP (Strategic Highway Research Program) data, university studies and, to some extent, credible user testimonies provide third party verification of claims. Manufacturers who don't provide sound science substantiation for their claims deny a user the information necessary to make those decisions.

 **We stand behind our claims because there is sound science to back them up, much of which is available on the Cargill Salt and Diamond Crystal® salt websites.**

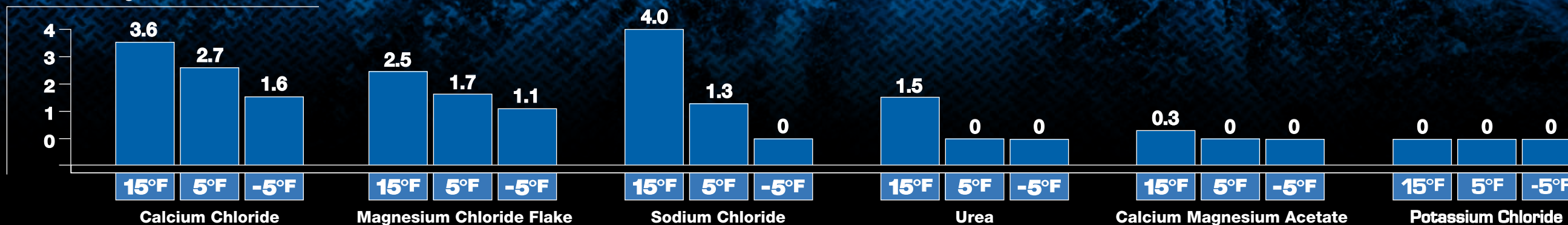
## QUESTION FIVE

**Q** What are the applicable cautions and best practices?

**A** The manufacturer should provide Material Safety Data Sheet information, as well as forthrightly disclosing useful data, warnings and information. This could include prohibited applications, product staining ratings on various surfaces, and best practices to avoid or minimize unintended harm to pets, adjacent vegetation and concrete.

 **Diamond Crystal® salt and Cargill Salt websites address many commonly experienced ice melt situations in our Frequently Asked Questions section. We also welcome your questions and helpful suggestions about relevant winter safety issues for the benefit of all.**

**Pound of ice melted per pound of ice melter ingredient after 60 minutes**



All melting ingredients applied at standard SHRP test rate of 1/3 cup per square yard.



15°F = -9°C  
5°F = -15°C  
-5°F = -21°C