ENVIRO-MELT

"Enviro Melt" is an effective, economical, environmentally friendly ice melter, with considerable benefits over pure sodium chloride, or fertilizer based products.

How Does Enviro Melt Work

"Enviro Melt" works by depressing the freezing point of water (in the form of ice or snow). The liquid that is formed – brine – spreads under the ice and snow, breaking the bond with the pavement surface. Once the ice is loosened it can easily be removed by mechanical means. If applied prior to a snowfall the resultant layer of brine will prevent the snow and ice from adhering to the surface.

Effective Temperature

The temperature at which "Enviro Melt" is effective is -36^{o}C. This is the "practical" lowest temperature limit for the material, i.e. the temperature at which the product will be effective within 15 to 20 minutes of application.

Effective Time

An ice melt product should work within an appropriate time if the effective time is greater than 60 minutes then the effectiveness of the product is low. "Enviro Melt" has an effective time of approximately 15 to 20 minutes at its effective temperature of -36^{o}C. The speed at which the ice melt goes into solution is the key factor for the efficiency of an ice melt. "Enviro Melt" is a blended product and has some components that would prefer by nature to be a liquid, i.e.: hydroscopic and absorbs water from the atmosphere. The absorption of water generates heat, which produces more water, which generates more heat and so the cycle goes on. It is the liquid that melts the ice not the solid ice melt product. Therefore, the ice melts that readily form solutions will be the most effective products. Some ice melt products prefer to be solids and other materials do go into solution but require heat to form the solution.

Quantity of Product Used

The quantity of product employed to obtain the desired effect is also an important factor. When "Enviro Melt" is compared with a pure Sodium Chloride based product the volume used would be 150 g/m^2 compared to 500 g/m^2 for the salt based.

Re-application Times

Another measure of the effectiveness of an ice melt is the frequency of re-application. Because the “Enviro Melt” contains components that do not readily evaporate and they prefer to remain as a liquid, re-application is not required as often. When further ice or snow is formed and the brine becomes diluted or washed away, the product will have to be re-applied.

Other Factors

Environmental. The effects on plant life - grass, trees and shrubs - is reduced with “Enviro Melt” because of its special blended composition. Overuse of any ice melt may have a detrimental effect on some plant life. “Enviro Melt” will have the reduced effects compared with a pure Sodium or Potassium Chloride based product.

Concrete. Concrete can be affected in two ways, chemically and physically. “Enviro Melt” does not chemically react with concrete, however there are a number of products that do have a chemical reaction with concrete.

Physically, the ice melts affect the concrete because as they produce liquid/brine, this can be absorbed into the concrete surface which is porous. The liquid/brine can freeze in the pores of the concrete, and it is the freeze/thaw cycles that cause the concrete to break up. If the freezing point of the brine is only -10^{o}C then the brine will go through more freeze/thaw cycles during the winter season than if the brine freezes at -32^{o}C. “Enviro Melt” has a brine freezing point of -36^{o}C.