

\$AFER INVESTMENTS

BRINE SOLUTIONS

We have all seen the white chalky lines on the highways left behind by the road crews in anticipation of an impending snow or ice storm. These brine treatments are a mixture of a salt, such as sodium chloride or calcium chloride, and water. They are applied in advance of a snow or ice event to make it more difficult for the snow or ice to adhere to the road surface, allowing for more efficient plowing and safer driving. This same technique can be utilized on a smaller scale to pre-treat sidewalks and walking paths around your schools to minimize slip and fall potential.

The large-scale road brining operations typically use rock salt (sodium chloride) mixed to about a 23% salinity level which makes the solution effective to approximately 15 degrees F. For colder weather applications, calcium chloride can be used which is effective down to -20 degrees F. However, purchasing all the mixing equipment, tank storage, applicator machinery and salinity measurement equipment is a costly proposition for all but the largest districts. Still, there are commercially available pre-treatments that can be used to help protect the most critical areas of the school property such as the walkways around the buildings.

Every year, the JIF experiences numerous weather-related slips and falls while people are entering and exiting the facilities. As part of your safety and risk management efforts, treating these areas in advance of a storm can significantly reduce the risk of these losses. Common pre-treatments, such as Bare Ground (magnesium chloride), apply a protective layer over the walking surface making it more difficult for snow and ice to stick. These products are very cost-effective, especially when you consider the human and economic costs of a serious slip and fall injury.

The product is available pre-mixed in sizes ranging from one gallon to 1500 gallon containers, including popular 5 gallon, 30 gallon and 55 gallon sizes. The product can be placed into hand sprayers for small area applications or powered carts for larger applications. Truck-mount applicators are available for treating parking lots. As would be expected, the per gallon cost is lower as the amount ordered increases. Five gallon containers cost about \$60.00 (\$12 per gallon), while a 55 gallon drum brings the cost down to less than \$7.50 per gallon. Hand applicators can cost as little as \$40, while cart applicators can range from \$500-\$900. Vehicle-mount sprayers start at about \$2500 and go up from there.

According to the manufacturer's website (www.bareground.com), the product can treat 1000 square feet per gallon and a 5 gallon container is equivalent to approximately 250 pounds of rock salt. There are other similar products available that you may wish to investigate. Pre-treating walkways is just one more tool you can add to your arsenal of proactive safety efforts and at a reasonable cost.



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