

The Effects Of De-icers On Concrete

The effectiveness of various chemicals such as magnesium chloride, sodium chloride and calcium chloride in maintaining safe driving surfaces during the winter months is well documented with some chemicals proving to be superior to others. What is not so conclusive is the effect these chemicals have on concrete, but we can dispel at least one misconception.

One deterioration process often associated with deicing chemicals is called spalling. Spalling is the local flaking or peeling away of the near surface portion of hardened concrete. The peeling away of the surface area results from a number of processes which include the expansion of the reinforcement bars within the concrete, concrete that is not air-entrained to properly improve durability during freezing conditions, too much water used when mixing the concrete, poor workmanship & installation errors, physical damage, improper use of de-icing chemicals as well as the expanding/contracting effects of the freeze-thaw cycle.

The proper deicing applications can actually mitigate the effects of spalling by reducing the amount of freeze/thaw cycles. This is achieved by using high performance deicers such as $MgCl_2$ which will significantly reduce freeze points and prolong the refreeze period and subsequently reduce the expanding/contracting effects of the freeze/thaw process.



RoadWatch

Keeping you up to speed when nature strikes

Summer 2011

Focus Is On High Performance In North America And Europe

Snow management professionals on the other side of the Atlantic have had to rethink their reactive approach to maintaining safer roads in Europe. Their winters are becoming more severe drawing parallels to those at similar latitudes on the western shores of the Atlantic with consistently colder temperatures and significant wintry precipitation. Interestingly enough, their long

performance liquids provides them. And, have long adopted these techniques to answer salt shortages and environmental concerns. The three most used liquids for pre-wetting are Salt Brine, Magnesium Chloride and Calcium Chloride. In the areas with lower temperatures, high performance liquids such as Magnesium & Calcium are preferred. Not only are they hygroscopic, attracting

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adopted practices of pre-wetting salt and anti-icing with pre-wetted salt are not dissimilar to the practices being championed in the west. Does that mean that we are on the right track?



moisture from the air, but they prevent the salt from drying off and blowing away practically eliminating those harmful dust clouds associated with salt brine applications.

Their answer to weather change is to intensify their existing application methods, increasing the use of high performance liquids to maintain service levels. Years of experience and a close respect for the environment dictate the appropriate solutions to winter road safety application methods. Looks like we are on the right track!

See full report on our website www.innovativecompany.com/blog/road-watch

	5 Freeze / Thaw Cycles	10 Freeze / Thaw Cycles	15 Freeze / Thaw Cycles
Sodium Chloride	-25	-120	-200
Calcium Chloride	-15	-40	-75
Magnesium Chloride	-3	-5	-8

SAFETY • ENVIRONMENT • COST

Europeans know first hand the ultimate savings in time, money and lives that anti-icing and the pre-wetting of salt with high



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Testimonials

- BNQ Certification – Along with prestigious certifications from the OPSS 2503 & 506 for both dust suppression and deicing, and equivalency approvals from NL, PEI, NS & NB DOT's, and BC MOT and after a detailed year long process, we are proud to share that our magnesium chloride solid and liquid products have satisfied the ecotoxicological requirements for the product to be used as a Dust Control Agent in the province of Quebec.
- Eastern Ontarians won't have to deal with hazardous potholes any longer.....Our new stockpile location for ProPatch, our high performance cold mix consisting of a special blend of bulk bituminous liquid and carefully graded limestone, is now conveniently located in Carp, Ontario bringing our total stockpile locations within Ontario to 6 – all strategically placed within the province to better serve your pothole patching needs.
Windsor • Heidelberg • Uxbridge • Sudbury • Kingston • Carp



Sales Person of the Season - Champion Thawrox Representative for Southwestern Ontario - **Dave Huffman**:



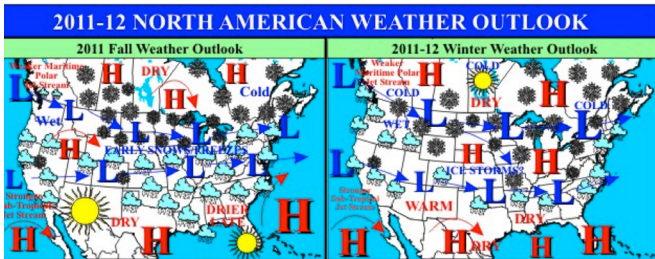
Born and raised in London, Ontario, Dave Huffman has spent much of his working career as a professional Sales Consultant who is committed to bringing tremendous value to the clients he serves. Among other things, Dave is passionate about innovation and is constantly looking for more efficient and effective methods of doing business.

Dave is proud to represent a company that takes great pride in its ability to support its growing client base. With one of the largest infrastructures in the road service industry for Canada and the Northeast USA, Innovative is one of the few companies that can actually follow through on their bold commitment to be *Ready when Nature Strikes. Guaranteed.*

Did You Know

Innovative has launched a new website. Check us out at www.innovativecompany.com.

Be Prepared This Winter



US Famer's Almanac Winter Outlook for 2011-2012 – No “snowmageddon” forecasted this season, but another cold & snowy winter predicted for the eastern third of the country with three major weather tracks coming in from across the Gulf Coast, Southwestern Canada and the Atlantic Coast bringing in that extra precipitation. Start planning your winter strategies today.



For More Info Call
1-800-387-5777
innovativecompany.com

Nitrous 1-2-3

Nitrous 1-2-3 is a process that involves the addition of liquid to solid based products to increase ice melting performance. The results produce safer road conditions at lower costs with less sand and salt usage.



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PROUD TO BE CELEBRATING **25 YEARS**