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Ice Melt Do's and Don'ts

Manufacturers outline the five most common mistakes end-users make and give advice on how to do it right. Excerpt from CleanLink.com article By Becky Mollenkamp

As summer fades into winter, the focus of housekeepers' work in entryways shifts from cleaning up tracked-in dirt to cleaning up tracked-in snow. Winter weather is particularly challenging because winter-weather hazards can result in costly slip-and-fall accidents.

Ice melt products can help facility managers keep their buildings both safe and attractive. We asked some of the leading ice melt manufacturers to share the top five mistakes they've seen users make with their products — and to offer valuable advice on how to get it right.

Mistake #1: Not using it
Whether it is in an effort to save money or save time, some housekeepers opt not to use ice melt on slippery sidewalks and entryways. Unfortunately, this could be an expensive mistake.

"Ice melt plays a major role in preventing slip-and-fall accidents, because it rids surfaces of ice," says Kevin Wice, president of XYNYTH Manufacturing Corp. in British Columbia, Canada. "Falls represent a huge liability issue in many states and provinces, as many regulatory bodies have legislation that requires a business to take some action to prevent people from slipping and falling. By doing nothing, business-owners open themselves up to legal action."

When a storm dumps snow, a housekeeping manager may not see a need to put down ice melt as long as the parking lots and sidewalks have been shoveled. Underneath that snow, however, is typically a thin but dangerous layer of ice that would be obsolete if ice melt was used. Conversely, some managers only use ice melt after a major weather event, however, even a light dusting of snow can lead to slippery conditions if the snow melts and refreezes as the day wears on.

"Good snow and ice control is definitely a large part of slip-and-fall prevention," says George D. Lutz, quality assurance technical services manager for Cargill, headquartered in Minnetonka, Minn. "One slip-and-fall accident buys an awful lot of ice melt."

Mistake #2:
Using too much
Too often, cleaners believe that if a little ice melt does a good, than a lot must do a better job. In fact, according to manufacturers, less is usually more when it comes to ice melt. Overusing ice melt can lead to the product being unnecessarily tracked into the facility. It may also burn the vegetation beneath or around where the product is used.

"Excessive application rates do not improve performance," says Greg MacDonnell, senior marketing manager for The Dow Chemical Company, headquartered in Midland, Mich.

Every product is different; of course, so it is essential for cleaners to read application instructions before using ice melt. The package should list recommended quantities to assist in determining the amount needed for a particular area (for example, it may call for 4 pounds of ice melt per 200 square feet).

Manufacturers recommend applying ice melt using a handheld fertilizer spreader for small areas or a walk-behind spreader for large areas. Scoops and shovels almost always cause overuse, whereas a spreader

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ensures the product is applied evenly. To make application even easier, colored ice melts are now available to help users see if they are over applying.

“Generally there is a perception that you need to cover the entire sidewalk with ice melt for it to work,” says Rich Otterstrom, a chemist for CP Industries in Salt Lake City, Utah. “In fact, ice melt dissolves in liquid and spreads out with normal use.”

Mistake #3:
Applying it wrong
Reading application directions for ice melt is important not only for determining quantity, but it is also the only way to be sure you use the product correctly. For example, when using a calcium or magnesium chloride product, it is important to cover your hands. Product packaging will also warn against using ice melt on a roof, and that rock salt spread on a parking lot will eventually find its way into the water system.

Instructions for use will also emphasize that putting deicer on a 10-inch pile of snow simply doesn’t work. Ice melt must be applied on the ground for it to be effective. Ideally, this should happen in anticipation of a storm. This isn’t always feasible, of course, so the product should be spread before precipitation freezes or as soon as possible thereafter, or immediately after snow has been cleared.

“Pre-application is ideal as an initial deterrent before the snow falls, though it is often difficult to predict necessity,” says Todd Spencer, national sales manager, jan/san, for North American Salt Company, headquartered in Overland Park, Kan. “If you are certain a storm is coming, getting the ice melt down first can have a huge impact on the ice and snow removal and ice melt application cycle.”

Long before winter weather hits, it is also wise to seal any surfaces on which you will use ice melt with a commercial-quality sealant. This important step will prevent moisture from seeping into the pores and cracks in the concrete. Contrary to popular belief, ice melt does not damage concrete, but ice can.

“The freeze-thaw cycle of ice and snow causes expansion and contraction within the crevasses, thus impacting the integrity of the surface,” Spencer says.

Some materials, such as brick, are especially porous and should not be treated with ice melt. Cleaners with these types of surfaces should contact their distributor or manufacturer for appropriate treatment options.

Mistake #4:
Using the wrong kind
Nearly all deicers on the market are made from one, or a blend of, five materials — calcium chloride, sodium chloride, potassium chloride, magnesium chloride, and urea. What makes these products different is how quickly they work and at what temperatures. This is determined by whether the deicer releases or absorbs heat upon contact with snow and ice.

Exothermic deicers, which release heat to melt the ice, work the quickest and are effective at a broader range of temperatures. For example, solid calcium chloride releases heat and is effective down to –25 degrees Fahrenheit. Endothermic deicers, which absorb the sun’s heat and use it to break ice down to liquid brine, work more slowly and are effective at a smaller range of temperatures. For example, solid sodium chloride absorbs heat and is effective down to about 20 degrees. The predominant chemical in a blended product will determine its performance.

Generally, the price of deicer is determined by its performance. If a product is fast or if it works at lower

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temperatures, it will cost more. That's why it is important to work with your distributor to determine which product best suits your needs. Many times, a less expensive product is perfectly acceptable.

"It is important to use ice melters that melt to the temperatures that normally occur in your area," says Bill Kinney, national sales manager of Frank Miller & Sons in Riverdale, Ill. "It is a misuse to choose calcium chloride or magnesium chloride in areas where the temperatures rarely drop below 0 degrees. Using ice melt that melts in accordance to your area's temperature and climate, you will have better results as well as cost savings."

There is a deicing product to suit every need, whether it is for extremely cold environments or for environmentally sensitive locations. For instance, newer "green" products are less harmful to workers and vegetation.

Mistake #5:
Not cleaning it up
Tracked-in ice melt is unattractive and has the potential to damage floors. Sodium chloride ice melt (also called rock salt) leaves a white powdery residue that, if allowed to sit on the floor too long, can dull the finish. Calcium chloride and magnesium chloride ice melts leave behind an oily residue that can damage urethane or wax finishes used on wood floors. The oily residue can be slippery on smooth floors (a potential hazard) and can attract dirt on carpets.

If never removed, either type of product may eventually harm wood floors by drawing out natural moisture, causing splintering, or lead to dry rot issues in carpets and rugs.

The best way to prevent ice melt damage is to prevent it from being tracked into the building. Use track mats both outside and inside all entrances and clean them with a mop or vacuum throughout the day. "A track mat will go a long way to making your life easier," Lutz says.

Once the product has been tracked in, however, it needs to be cleaned up in a timely manner. Use a vacuum or a mop to clean up sodium chloride products. Mop up calcium chloride or magnesium chloride ice met with a good detergent. If dirt has been tracked in with a deicer, a mildly acidic cleaning agent works best. Carpets damaged by tracked-in residue will typically require professional cleaning.

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