



ARMCA'S Recommendations

CAUTION AND UNDERSTANDING THE USE OF DE-ICING CHEMICALS

Surface deterioration caused by chemical de-icers is not a concrete quality problem, but rather a concrete maintenance issue. Proper use and maintenance of finished concrete products are the end user's responsibility.

De-icers

Achieving a quality, long-lasting concrete product is dependent on using good materials, proper construction techniques, and protecting the concrete from adverse conditions.

Exterior concrete surfaces such as pavements, garage slabs, driveways, aprons, sidewalks and gutters, are especially susceptible to adverse environmental conditions when de-icing chemicals are used improperly.

The use of de-icing salts containing chlorides may cause spalling and degradation of concrete surfaces.

This is especially true with new concrete surfaces and has resulted in a considerable amount of damage to quality concrete within the first winter season.

Once properly placed and cured, the following instructions can minimize, but not alleviate, spalling and surface degradation caused by the use of de-icing chemicals:

1. Remove snow and ice manually, as it accumulates, by shoveling, plowing or other mechanical means.
2. Use sand on ice for safety.
3. Do not use de-icing chemicals containing chloride compounds. This includes, but is not limited to, calcium chloride, magnesium chloride, sodium chloride (salt) and potassium chloride. Never use any de-icer that contains either ammonium sulfate or ammonium nitrate.
4. Wash driveways and other concrete surfaces, whenever the weather allows, to remove salts that drip from vehicles. Many governmental agencies are using chlorides for de-icing on roads and bridges, and these are transferred to vehicles travelling on these roads.

5. Be aware that many chemical fertilizer products can be harmful to concrete surfaces. Ammonium nitrate is found in many fertilizers and these fertilizers should not be allowed to remain on surfaces. Flower pots, with soil containing fertilizer, will damage the concrete slab they sit on.
6. Avoid using acids to clean concrete.
7. Membrane sealers (available at local hardware stores) need to be reapplied at least every other year or when the finish shows signs of wear. When applying, be sure to follow manufacturer's recommendations.
8. Siloxane or Silane penetrating sealers should be reapplied every three years, or following manufacturer's recommendations depending on conditions.

If you are not the owner of the newly installed concrete, forward this pamphlet to the owner and advise them of the precautions necessary to maintain the quality product installed for them.

DISTRIBUTORS OF SILANE OR SILOXANE SEALERS

National Concrete Accessories (Edmonton, Red Deer, Calgary):

Sikagard SN-40 VOC

Enviroseal 40

Certi-Vex Guard Clear (special order)

Gem-Gard SL (special order)

Sikagard SN-100

Hydrozo 100

Gem-Gard SX (special order)

Northland Construction Supplies (Edmonton, Red Deer, Calgary, Ft McMurray):

Sikagard SN-40 VOC

Sealmaster 40

Sikagard SN-100

Unicon Concrete Solutions (Edmonton, Calgary):

Enviroseal 40

Masterseal SL 40 VOC (special order)

Hydrozo 100

Baracade Silane 40 IPA (special order)

For additional information, please contact:

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