

## ICE MACHINE CLEANERS

- Rapid scale remover
- Highly concentrated
- NSF registered
- OEM approved\*
- Functional in cubers, flakers, drum and tube machines
- Formulated for use in all makes and models of ice makers including those with nickel and tin plated evaporators

### Description

Nu-Calgon provides two formulations of liquid-based ice machine cleaners, Liquid Ice Machine Cleaner and Nickel-Safe Ice Machine Cleaner. Both are designed for removing lime scale deposits from ice machines, coffee urns, and vending equipment.

Liquid Ice Machine Cleaner is a 75% phosphoric acid of the highest food-grade quality. It is fast acting yet very safe to use and it does not give off any harsh fumes. Because of its 75% phosphoric acid content, it is the most concentrated ice machine cleaner in the market. Usage rate is 3 fluid ounces with one gallons of water.

Nickel-Safe Ice Machine Cleaner is a specially formulated citric/phosphoric product for removing scale deposits from ice makers having nickel-plated or tin-plated evaporators. It is acceptable for use in machines made by Manitowoc and other manufacturers using nickel. In fact, it was the industry's first nickel-safe product, introduced in collaboration with Manitowoc. Usage rate should be in accordance with the manufacturers instructions or 5 fluid ounces with one gallons of system water.

### Application

The number one category of problems troubling an ice machine are water-related, and the most frequently is lime scale. As the water is frozen into ice during an ice maker's cycle, the naturally occurring dissolved minerals in the water, some of which can combine to form lime scale, remain behind in the unfrozen recirculating ice water. As the cycle continues and more water is made into ice, the minerals over concentrate and eventually precipitate as a lime scale deposit.

As the scale begins to form, it creates a physical obstruction that results in: plugged distribution holes, restricted water flow and eventually the ice maker will hang-up or jam. Ice harvest is reduced and eventually the machine will shut down.

This sequence of events can affect both cubers and flakers. Some believe that flakers are free of scale problems since all of the water is made into ice. However, flakers can scale-up as well, jamming the auger and eventually resulting in a broken belt or drive mechanism.

Once the machine is scaled up, it must be cleaned, requiring the use of an acid so that the scale can be dissolved. Obviously, the acid must be effective in order to dissolve the scale but it must also be equipment safe.

### Packaging

Liquid Ice Machine Cleaner  
 8 fl. oz. (13.6 net wt. oz.)  
 1 gallon  
 55 gallon

**4207-47**  
**4207-08**  
**4207-01**

Nickel-Safe Ice Machine Cleaner  
 16 fl. oz. bottle  
 1 gallon  
 55 gallon

**4287-34**  
**4287-08**  
**4287-01**



Liquid Ice Machine Cleaner



Nickel-Safe Ice Machine Cleaner

\* Nickel-Safe Ice Machine Cleaner is OEM Approved.

## DIRECTIONS FOR USE: Liquid Ice Machine Cleaner

*This product must be used in accordance to the following directions by HVACR professionals only.*

### DIRECTIONS FOR USE IN ICE MACHINES AND COFFEE BREWERS

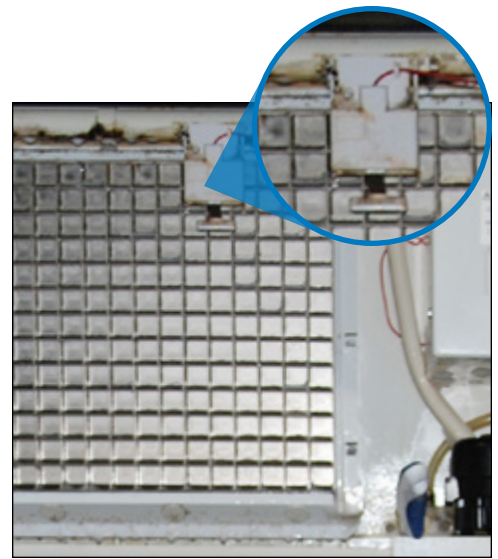
1. Leave ice machine pump in operation but turn off refrigeration.
2. Drain unit and refill with fresh water.
3. Add Liquid Ice Machine Cleaner to water in unit. Use 8 fluid ounces for up to 3 gallons of water, or one fluid ounce of product for every 48 fl. oz. (3 pints) of water.
4. Allow cleaner to circulate for about 30 minutes. If solution does not contact all scaled surfaces use a brush to get cleaning solution to those parts. If scale is extra heavy, another dose of cleaner may be necessary. Ice machine drums may be cleaned by adding bottle of cleaner to a glass or plastic container holding two quarts of water and brushing the solution on the scaled surfaces.
5. After scale has been removed, drain out all the water and flush thoroughly with fresh water

NOTE: DO NOT use on nickel plated or galvanized surfaces. On these surfaces, you should use Nu-Calgon's Nickel-Safe Ice Machine Cleaner. Do not mix with chlorine bleach.

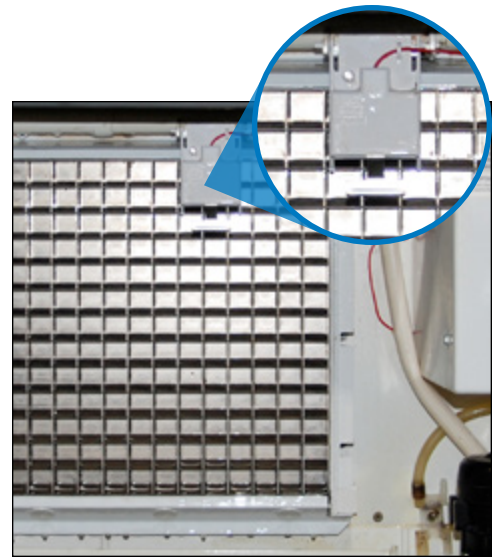
## DIRECTIONS FOR USE: Nickel-Safe Ice Machine Cleaner

*This product must be used in accordance to the following directions by HVACR professionals only.*

1. Turn off refrigeration, shut off water supply and discard ice from bin.
2. Remove all components that may be scaled with deposits.
3. Mix 3 oz. Nickel-Safe Ice Machine Cleaner per gallon of warm water in plastic container and place components in solution. Soak the components until they are free of deposits; for stubborn deposits use a soft brush to help.
4. Use above solution to clean the entire machine where deposits have collected. Then rinse cleaned areas with potable water.
5. Replace cleaned components and turn on water.
6. To clean evaporator and recirculating water system, add Nickel-Safe Ice Machine Cleaner to the water in ice maker according to the manufacturer's instructions. If none are available, use 5 oz. of the product per gallon of water in the machine.
7. Allow cleaning solution to circulate for up to 10 minutes; recirculate the solution longer to remove heavier deposits. Drain cleaning solution and flush with potable water for a minimum of 30 seconds.
8. Thoroughly rinse bin with potable water.
9. Recommended: Sanitize the machine with IMS-III Sanitizing Concentrate.
10. Return machine to service and discard the first batch of ice.



**BEFORE CLEANING ICE MACHINE**



**AFTER CLEANING ICE MACHINE**

## Slime Growths

If bacterial slime growths or yeast formations were occurring, it is recommended that the ice maker be sanitized after cleaning and that these future biological growths be prevented. Use IMS-III Sanitizing Concentrate, an EPA registered and OEM approved product, to sanitize the ice maker.

## Filtration

Because an ice maker or coffee urn scaled up, it is necessary to filter the water to inhibit scale and remove chlorine, taste, odor and sediment. Contact Nu-Calgon for recommendations.

