

# WATER CONDITIONING SALT FAQs

## 1. Can salt enter my drinking water?

No. Salt's sole purpose in your water softener is to regenerate the resin beads that actually take the hardness out of your water. This exchange does not make your water taste salty or significantly increase your sodium intake.

## 2. What's the difference between solar salt (crystals) & evaporated salt (pellets)?

Solar salt is a natural product obtained through the evaporation of seawater or inland brine sources. It has a sodium chloride content of 99.5% or higher, and a water insolubles level of less than 0.03%. It is most commonly sold in a crystal form, but also may be sold in the form of compressed pellets or blocks.

Evaporated salt is manufactured by solution mining underground bedded salt deposits of dissolving salt to form a brine and then evaporating the moisture using energy in the form of natural gas or coal. Evaporated salt (in the form of compacted pellets, sheeted salt - called cubes, or blocks) has a sodium chloride content ranging from 99.6% to 99.99%. Water insoluble matter generally is less than 0.01%.

## 3. Should I use crystals or pellets?

Since solar salt contains slightly more water insoluble matter than (evaporated salt) pellets, consideration should be given to salt usage, softener cleanout frequency and softener design. If salt usage is light one could probably use the products interchangeably. If salt usage is heavy, insolubles will build up faster when using solar salt, and the need to more frequently clean the brine tank/reservoir will be increased. Brine tank cleanout can be a messy task.

The type of salt best suited to a particular softener will vary in accord with softener design. Usually, cabinet-style self-contained softeners require salt that is low in water-insoluble matter, while side-by-side units with separate salt holding tanks are easier to clean and therefore allow more flexibility in choosing a salt product.

## 4. What about using rock salt?

Rock salt will work in a softener; however, because of the relatively high level of water insoluble matter present in rock salt, it is recommended for use only if the consumer is willing to perform routine brine tank cleanout. For the average home softener this can be required 2 to 3 times per year.

## 5. What is 'mushing' or 'bridging'?

Occasionally, if you use salt pellets or cube-style salt which are too loosely compacted, they may revert to tiny crystals of evaporated salt - similar to table salt. These crystals may bond, creating a thick mass in your brine tank. This mushing may interrupt brine production - the key element for refreshing the resin beads in your softener.

Bridging is a condition that sometimes occurs in the brine tank when salt sticks together forming a "bridge" that prohibits it from coming into contact with the water in the tank. You can eliminate bridging by using a 100% water soluble pellet product in your brine tank.

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## 6. How much salt should I put in my water conditioning unit?

The salt level should be maintained a minimum of 3 to 4 inches above the water level, unless otherwise directed by the owners manual or water conditioner technician.

Loosen any encrusted salt that may be adhering to the perimeter of the salt keeper, making sure that any large pieces are broken up. Distribute the salt evenly across the salt keeper. Make sure water level is appropriate for optimum operation.

## 7. Is water softening salt harmful to animals?

As with food considerations, water softening salts are not intended for human or animal feeding. The particle size is inappropriate for small animals. In addition, water softening salt may have additives that are inappropriate for animal feeds.

## 8. Is water softening salt harmful to onsite wastewater treatment systems?

According to the EPA, "Studies conducted by soil scientists at the University of Wisconsin and the National Sanitation Foundation conclude that the wastewater effluent generated from properly operating and maintained water softeners will not harm onsite systems that are designed, operated and maintained appropriately. Specifically, the studies conclude the following:

- High concentrations of calcium and manganese in the softener backwash water have no deleterious effect on the biological functions occurring in the septic tank and may, in some cases, be helpful.
- The additional volume of wastewater generated (typically about 50 gallons per recharge cycle) is added slowly to the wastewater stream and does not cause any hydraulic overload problems.
- Soil structure in the soil absorption field is positively affected by the calcium and magnesium ions in the water softener effluent (Corey et al., 1977).

Regarding the last conclusion, some people have the misconception that the salt brine that enters the ion exchange tank also exits the tank as wastewater. In fact, the influent with its high concentration of sodium ions is very different than the effluent, which has a high concentration of calcium and magnesium ions. Consequently, the potential for chemical clogging of clayey soil by sodium ions is reduced. The calcium and magnesium input may even help improve soil percolation."

