Advantages

- No salt required
- No backwashing required
- No regeneration cycle required
- No increase in sodium content in water
- Removes the previous scales of plumbing
- Catalytic process converts Ca and Mg into harmless micro crystals
- Maintenance free. No extra cost incurred.
- No chemicals required for disinfection
- No electrical connections required
- No drain connections required
- No control valves required
- Very easy to install
- Great savings against conventional salt based water softeners
- Provide the best quality healthy water without the addition of Sodium or Phosphates

Green Technology!

Features

- 5 – 7 years media life
- Nucleation Assisted Crystallization (NAC)
- Best Quality Drinking Water
WHAT IS FILTERSORB® SP3?

FILTERSORB® SP3 is the result of extensive research work along with its undisputable success in the market, worldwide since 2005.

Watch®’s core motivation for developing this product was to find an alternative to conventional ion exchange based water softeners, reverse osmosis or other chemical based systems that prevent scale.

Recent restrictions placed upon the above mentioned technology lead to an environment friendly, cost effective solution for hard water. Watch®’s FILTERSORB® SP3 completely takes care of the primary cause of scale forming cations viz. Ca²⁺ and Mg²⁺.

Working Principle

When the hard water under goes nucleation in the pressure vessel, the calcium bicarbonate Ca(HCO₃)₂ is transformed into aragonite form of calcium carbonate CaCO₃ crystals. These crystals are formed through decomposition and crystallization process, forming very stable harmless crystals.

The following equation describes the reaction that occurs inside the pressure vessel when flow over grains of nucleation.

\[ \text{Ca(HCO}_3\text{)}_{2} \rightarrow \text{CaCO}_3 + \text{CO}_2 + \text{H}_2\text{O} \]

The name fragment “SP [Scale Prevention] 3” is to indicate this unique transformation of water hardness Ca(HCO₃)₂ into 3 components viz.

1. CaCO₃ (micro-crystals)
2. CO₂ (colloid) and
3. H₂O (pure)

In the pressure vessel, the equilibrium of carbonate species in water is changed, assisted by the driving force of stable crystal formation and therefore the reaction is pushed to the right →. With this technology, as long as CO₂ is being removed the soluble Ca(HCO₃)₂ converts into insoluble calcium carbonate [CaCO₃] crystals.

The calcium carbonate crystals grow steadily. They are very stable and cannot dissolve (incapable of forming scale) in the water.

Glass grains crystallization sites provide increased nucleation sites for the formation of submicron sized CaCO₃ crystals. Hence this amazing process is called NUCLEATION ASSISTED CRYSTALLIZATION or NAC in short.

Lifespan of the Media

The effective average lifespan of FILTERSORB® SP3 is 5 to 7 years, depending on the feed water conditions.

Standard packing and shipping mass

FILTERSORB® SP3 is packed in 60 Liter Drums.

<table>
<thead>
<tr>
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<th>L x W x H (cm)</th>
<th>Shipping Mass</th>
</tr>
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<tbody>
<tr>
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<td>60 x 40 x 80</td>
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Food grade water conditioning media

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Applications

FILTERSORB® SP3 has proven itself in a variety of applications as an alternative to ion exchange softening or other conventional water treatment methods. The maintenance-free characteristics make it especially suited for Foodservice and Commercial applications where equipment maintenance is often overlooked. FILTERSORB® SP3 treated water preserves the essential minerals Calcium and Magnesium, making the water most healthiest drink available.

Home appliances: Faucets, water pipes, shower heads, shower cabins, toilets. All beverage systems, kitchen machines, dish washers, ice cubes, compact washers and dryers.

Major appliances: Central heating, air conditioners, water heaters, air humidifiers, coffee and tea makers, solar heating systems, water coolers.

Boilers: Hot water boilers, central heating boilers, combo boilers, catering water boilers, boilers and pool heaters, commercial water heaters, industrial hot water boilers.

Cooling towers: Closed circuit cooling towers, open circuit cooling towers, concrete cooling towers, cross flow cooling towers.

Industrial appliances: Winery, Car Washing, Diary Processing, Food & Beverages, Injection Moulding, Irrigation, Nurseries, Reverse Osmosis pre-treatment etc.

Other applications:
- Irrigation
- Swimming pools and SPA
- Dairy Processing
- Winery and Beverages
- Planting and Gardening
- Automobile Washing
- Hotel, Restaurants and Institutions
- Coffee and Tea-machines
- Vending appliances
  and many more...

Note: Do not use where water is microbiologically unsafe or with water of unknown quality without adequate disinfection before or after the unit. System must be maintained according to manufacturer’s instructions. Pre-treatment for sediment, Iron, Hydrogen Sulfide, Manganese, hydrocarbons and Copper may be required depending on conditions. Install systems in new facilities with copper pipe after six weeks of water use.
To know and learn more about this huge potential of FILTERSORB® SP3 please contact us:

Watch-Water® GmbH
Fahrbachstraße 14
68165 Mannheim, Germany
Tel. +49 621 87951-0
Fax +49 621 87951-99
info@watchwater.de

Certifications
FILTERSORB® SP3 is certified under ANSI/NSF 61 from WQA, USA
FILTERSORB® SP3 is BS 6920:2000 (British Standard, UK) certified.
FILTERSORB® SP3 is tested to meet MSZ 448-36:1985 standard (Hungary).
FILTERSORB® SP3 is certified from Department of Environmental Hygiene (Poland).
FILTERSORB® SP3 Tested to meet WRAS (Water Regulations Advisory Scheme, British Standard, UK) Standard of Product Quality and High temperature

Special Information: FILTERSORB® SP3 has good capacity to absorb Iron, Copper, Manganese, Lead, Zinc etc. Hence in high concentration presence of these contaminants the FILTERSORB® SP3 beads might change color due to dye leaching from the container tank made of polyethylene.

In case of any strange color change of the FILTERSORB® SP3 media beads or the treated water is noticed, please contact us with detailed water analysis.

Why we consider FILTERSORB® SP3 to be the best?

✓ No TDS change: As FILTERSORB® SP3 does not remove or add anything to the water. As no ion-exchange chemistry is used, the TDS of the water remains unchanged before and after the treatment.

✓ No pH change: pH value of the water remains the same. This factor makes the treated water suitable for almost any use where corrosion is concerned.

✓ Minerals Preserved: FILTERSORB® SP3 does not add sodium or any chemicals to the water. It simply preserves the Calcium and Magnesium contents of water, making the treated water arguably the healthiest mineral water available. Both Calcium and Magnesium are quintessential for nervous systems and muscles functionalities. They are indispensable parts in the cell chemistry of the plants and most of the life forms on earth.

✓ De-Scaling: Not only does FILTERSORB® SP3 prevent scale formation, but it also helps to remove the previously formed scales. During the flow some of the micro-bubbles are losing a small amount of CO₂ which diffuses rapidly in water and interact with surface scale, especially in closed spaces (pipes, boilers, etc). As a result, the scale which is already present on these surfaces is removed slowly.

✓ Biocidal effect: The NAC process creates the conditions that water dissolved CO₂ agglomerate to form micro-bubbles. These CO₂ bubbles actively destroy bacterial membranes acting as a biocide. So along with the scale prevention FILTERSORB® SP3 also helps to prevent Biofouling.