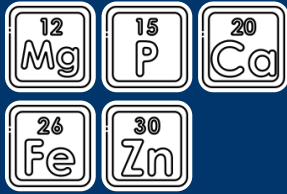




Deser
Water And Chemical Technologies CO. 

SCALE OFF

ANTISCALANT
CHEMICALS



Water is our most important resource in industrial production and in many fields.

Water contains dissolved solids causing hardness ions/inorganic salts and suspended solids.

As the amount of these ions increases, crystals form.

These crystals cause crusting and precipitation.



ANTISCALANS

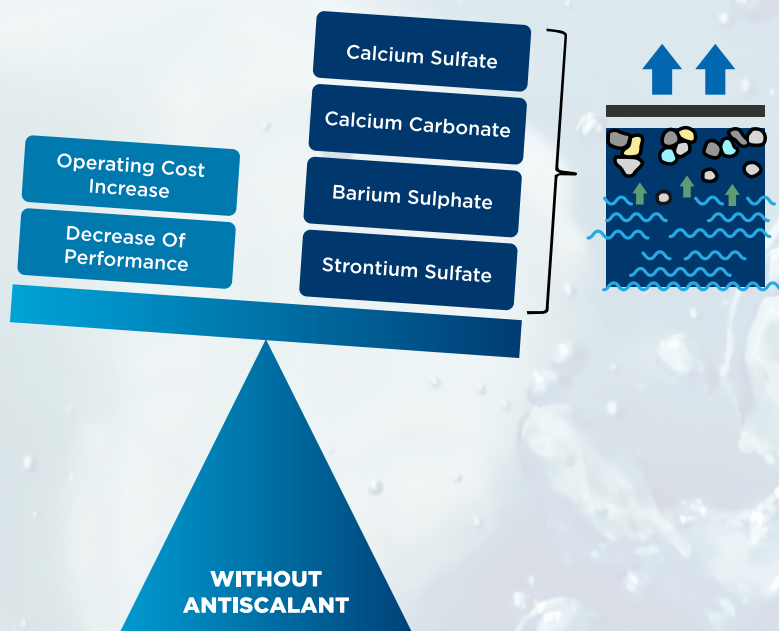
Anti-Scale

Anti Scaling Agent & Dispersant

Water passing through reverse osmosis devices causes deposits on the membrane.

The use of antiscalants is necessary for the membranes to work without clogging and to have a longer life.

METHODS	DETAILS	ADVANTAGES	DISADVANTAGES
FEED WATER PRETREATMENT	Softening, pH adjustment, and the use of larger pore size membrane.	Reduce the amounts of scaleforming ions in feed water; reduce the scaling propensity.	Requirement of additional equipment; corrosion problem, etc.
THE OPTIMIZATION OF OPERATIONAL PROCESSES	Feed water characteristics, crossflow velocity, the design of feed spacer, applied pressure, hydrodynamic conditions, the setting of membrane cleaning or target recovery.	Improve membrane surface environment; remove existing deposits.	Membrane damage caused by high pressure and frequent cleaning; increase energy consumption; reduced permeate production, etc
THE DEVELOPMENT OF NOVEL MEMBRANE MATERIALS	Surface modification, physical blending	Improve the antifouling performance of membrane.	Relatively high cost and not commercializable yet
THE ADDITION OF ANTISCALANT	Inhibit scale formation by chelation, dispersion, crystal distortion and threshold effect.	Achieve high water recovery; simple operation; high cost performance.	Increased biofouling; phosphorus emissions; difficult concentrate disposal.



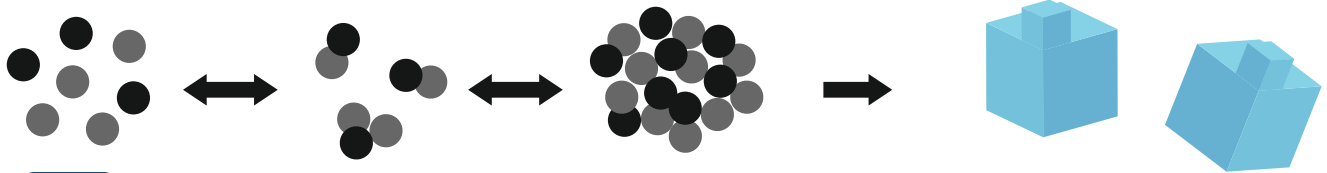
01 It is not one of the phosphonate-based antiscalants produced as standard.

02 It does not have a negative effect on the membranes in high dosing amounts.

03 High anti-clogging performance

04 Effective in sea water, well water and aggressive waters

05 SCALE OFF performs effectively at low dosage amounts.



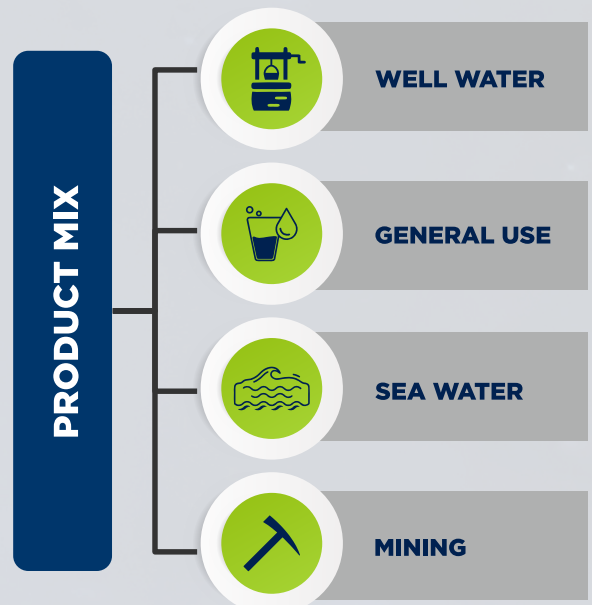
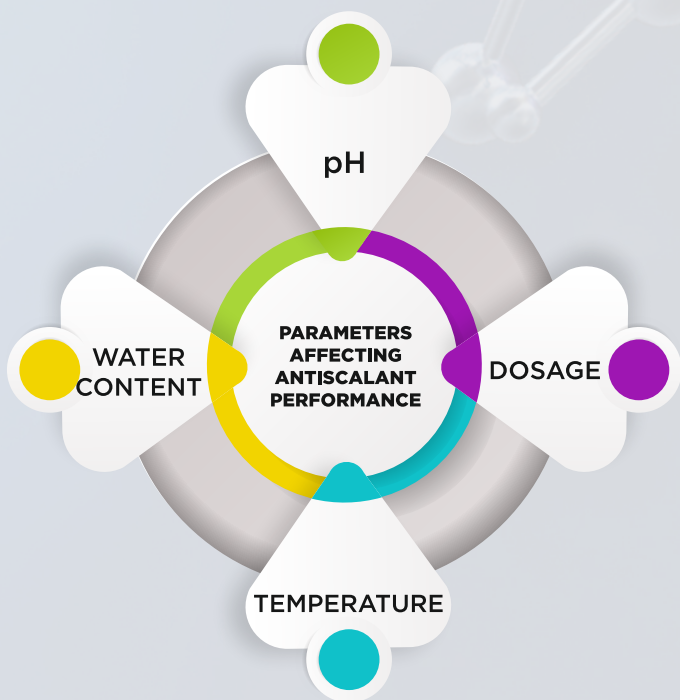
ANTISCALANT SCALE INHIBITION MECHANISMS

CHELATION	Chelate with cationic ions to increase the solubility of sparingly soluble salts.
DISPERSION	Generally, provide mineral crystal surface charge and keep them dispersed in solution by electrostatic repulsion.
CRYSTAL LATTICE DISTORTION	Interfere with normal crystal growth to distort the crystallization process.
THRESHOLD EFFECT	Disrupt the clustering and ordering processes with sub-stoichiometric amounts of inhibitor.



SCALEOFF ANTISCALANT

It is designed to increase the efficiency of reverse osmosis systems with chemicals produced in ISO 9001-14001 quality standards. Our products are formulated with approximately 10000 raw water and osmosis water analysis data in our database.



SCALEOFF 1000

SCALE OFF 1010

Effective Against Iron, Manganese and Phosphate

SCALE OFF 1020

Effective against Iron, Phosphate, Calcium, Sulfate and Magnesium

SCALE OFF 1030

Superior performance against Iron, Phosphate, Calcium, Magnesium, Sulfate and Silica

SCALEOFF 2000

SCALE OFF 2010

Effective against Magnesium, Iron and Silica

SCALE OFF 2020

Effective against Calcium, Sulfate, Iron

SCALE OFF 2030

Effective against Calcium, Magnesium, Sulfate, Iron, Silica and Manganese

SCALE OFF 2040

Superior performance against Calcium, Magnesium, Sulphate, Iron, Manganese

SCALEOFF 3000

SCALE OFF 3010

Effective against Calcium, Sulphate, Iron and Phosphate

SCALE OFF 3020

Effective against Calcium, Magnesium, Sulfate, Iron, Manganese, Chlorine and Silica

SCALE OFF 3030

Superior performance against Calcium, Magnesium, Sulphate, Iron, Manganese, Phosphate, Chlorine and Silica

Deser	SCALEOFF 1010	SCALEOFF 1020	SCALEOFF 1030	SCALEOFF 2010	SCALEOFF 2020	SCALEOFF 2030	SCALEOFF 2040	SCALEOFF 3010	SCALEOFF 3020	SCALEOFF 3030
FEED WATER SOURCE	GENEREL USE	GENEREL USE	GENEREL USE	WELL WATER	WELL WATER	WELL WATER	WELL WATER	SEAWATER	SEAWATER	SEAWATER
CALCIUM	●●	●●●	●●●●	●●	●●●	●●●	●●●●	●●●	●●●●	●●●●
MAGNESIUM	●●	●●●	●●●●	●●●	●●	●●●	●●●●	●●	●●●	●●●●
SULFATE	●	●●	●●●	●●	●●●	●●●	●●●●	●●●	●●●	●●●●
IRON	●●●●	●●●●	●●●●	●●●●	●●●●	●●●●	●●●●	●●●	●●●●	●●●
FOSFAT	●●●	●●●	●●●	●●●	●●●	●●	●●●●	●●●	●●●	●●●
SILICA	●●	●●	●●●	●●●	●●	●●●	●●	●●	●●●	●●●
MANGANESE	●●●●	●●●	●●●	●●●	●●●	●●●	●●●●	●	●●●●	●●●●
CHLORINE	●	●	●	●	●	●	●	●●	●●●	●●●●

●●●● Perfect Effect

●●● Very Good Effect

●● Good Effect

● Limited

