

ZI-CHEM 4140

Seawater Evaporators Scale Control

HIGHLIGHTS

ZI-CHEM 4140 is a specially prepared formulation of low molecular weight synthetic polymers designed to give maximum protection against all common types of scale, throughout the entire temperature range of existing evaporators. It is equally effective for flash or submerged element types.

ZI-CHEM 4140 prevents scale formation by a "threshold" mechanism, a small amount of treatment when added to the seawater prevents precipitation of a large amount of hardness salts. As a result ZI-CHEM 4140 delays the precipitation of all alkaline hardness and when precipitation does occur, the normal crystalline structure is so distorted that a fine sludge occurs, which does not compact but remains in suspension. This can be easily removed using the brine blowdown or de-concentrator.

With non-alkaline hardness such as calcium sulphate, ZI-CHEM 4140 gives a stabilising effect to the supersaturated solution, resulting in up to two times the normal solubility of calcium sulphate being achieved.

TYPICAL PROPERTIES

- Appearance: Clear amber liquid
- Specific gravity: 1.24 – 1.28
- pH (neat) 4.0 – 6.0
- Freeze point: -5 °C
- Flash point: 180 °C

PRIMARY APPLICATIONS

ZI-CHEM 4140 is normally dosed at a rate of 8 mg/L of distillate produced. The correct treatment level depends on the type of evaporator and its operating conditions along with the maximum brine concentration to be maintained.

Your ZI-TECH representative will establish the correct operating level.

FEEDING & CONTROL

ZI-CHEM 4140 should be diluted at least 20 times, preferably using fresh water injected continuously to the feed line. Overdosing is not detrimental. ZI-CHEM 4140 is not corrosive to steel mixing tanks or dosing pumps.

THE BENEFITS

- Increase distillate production
- Higher Flux rates across membranes
- Eliminate downtime for cleaning
- High quality distillate

COMMON APPLICATIONS

- Power generating facility
- Oil Refinery
- Petrochemicals

PACKAGING

- 30kg pails
- 240kg drums
- 1,200kg IBC's or in bulk

HANDLING & SAFETY

ZI-TECHASIA maintains a database of material safety data sheets (MSDS) on all our products. These contain health & safety information to assist in the safe and appropriate chemical handling, ensuring the protection of personnel.

