

Every drop counts:

**Sokalan<sup>®</sup>**

Additives  
for Thermal Desalination



 **BASF**

The Chemical Company

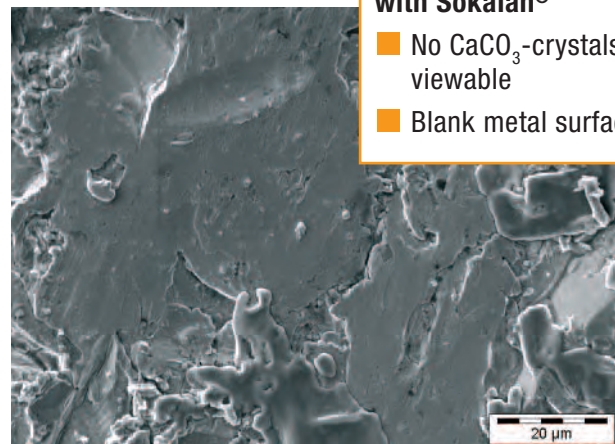
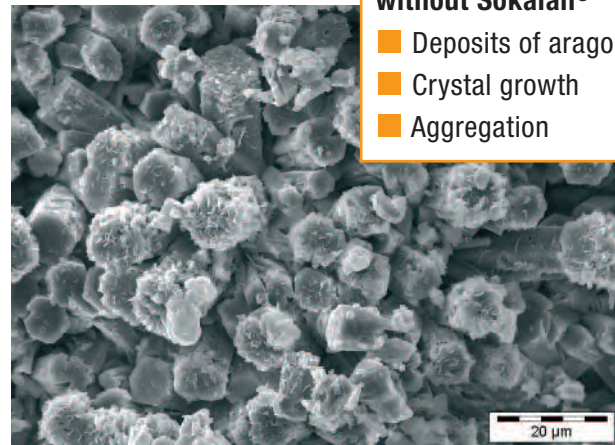
Every drop counts ...

## The outstanding antiscalant in thermal seawater desalination for MSF and MED plants

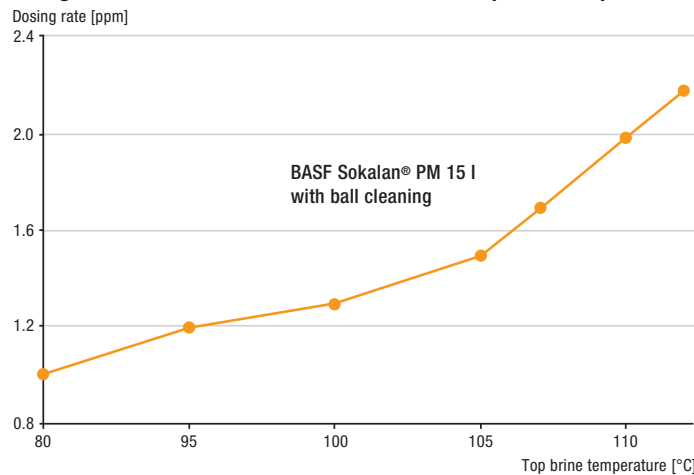
- Functions as well as scale control dispersant
- Outstanding scale-inhibiting performance
- Smooth operation also at high temperature
- Reduced dosage rate
- Longer operation time
- Higher output
- Reduced production cost

# Sokalan®

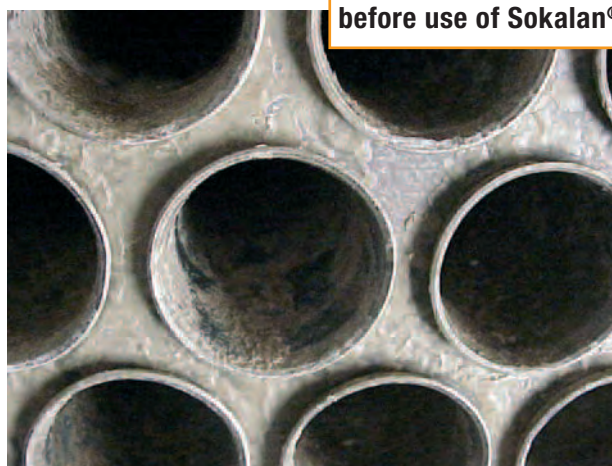
## CaCO<sub>3</sub> deposits on heat exchanger



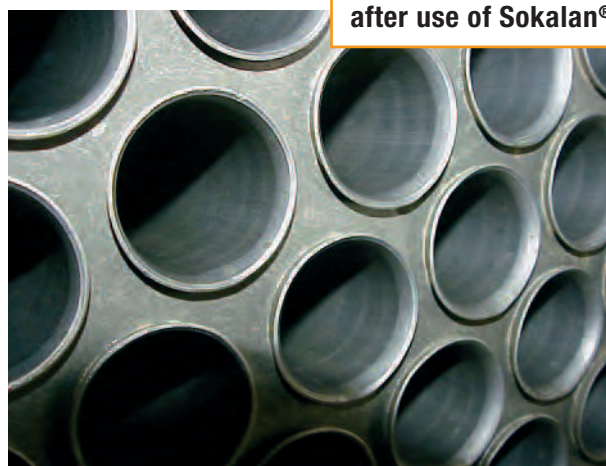
Dosage of Sokalan® PM 15 I as a function of the top brine temperature



# PM 15 I



before use of Sokalan®



after use of Sokalan®

## Sokalan® PM 15 I

Location	Process	TBT °C	Dose rate	Ball cleaning
Hidd Power Company, Bahrain	MSF	112	1.5	with ball cleaning
AGP – Taweelah “B” Plant, Abu Dhabi	MSF	112	1.7	with ball cleaning
Sitra Power and Water Station, Bahrain	MSF	110	1.5	with ball cleaning
Qatar Electricity and Water Company (QEWC), Qatar	MSF	105	1.5	with ball cleaning
Bainounah Power Company, ADWEA, Abu Dhabi	MSF	100	1.2	with ball cleaning
GECOL Homs Power and Water Station, Libya	MSF	90	2.0	without ball cleaning
Libya Iron and Steel Company, Libya	MSF	90	2.0	not applicable
Hawar Power Station, MEW, Bahrain	MED	65	2.5	not applicable
UCDEM St. Barthelemy, French West Indies, Carribean Islands	MED	60	2.5	not applicable
Tripoli West Power Station, Tripoli, Libya	MED	60	2.5	not applicable
Hidd Power Company, Bahrain	MED	65	3.0	not applicable
Marafiq Jubail IWPP, Saudi Arabia	MED	65	3.0	not applicable

## Approvals

- Certified by NSF and KIWA

## Ecotoxicological properties

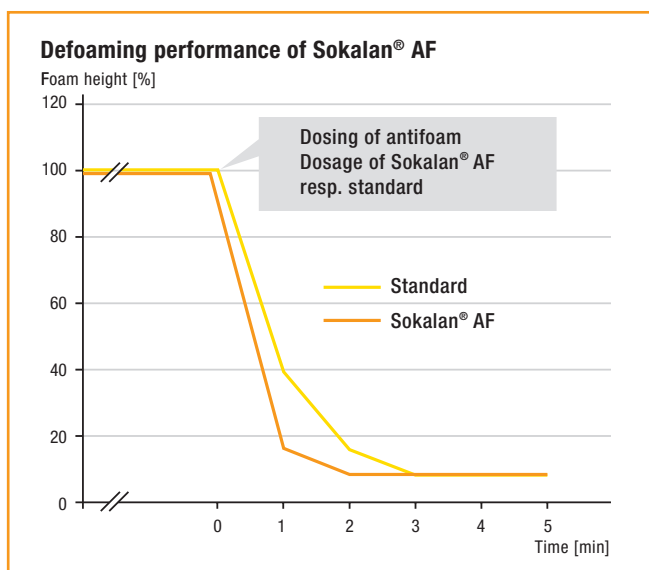
- Is not acutely toxic to aquatic organisms

<b>Bacteria</b>	EC 50 (0.5 h)	> 1000 mg/l
<b>Fish (<i>Leuciscus idus</i>)</b>	LC 50 (96 h)	> 100 mg/l

Boost your plant performance

# Sokalan® AF

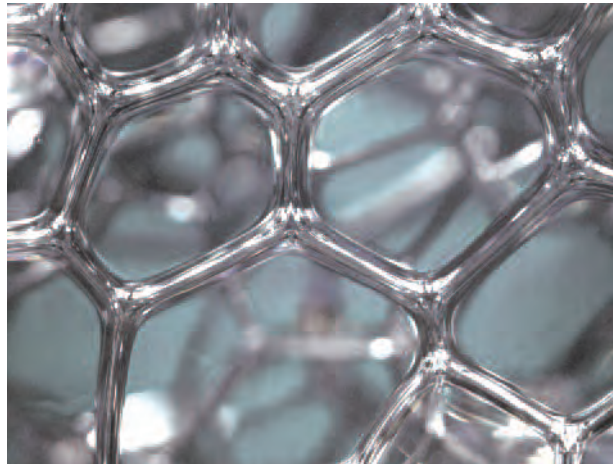
Excellent defoamer  
for the broadest range  
of antiscalants



## Application

- Sokalan® AF is a pure organic, silicone free antifoam
- Performs at lowest dosage rates
- Excellent foam control
- Destroys foam and prevents foam formation in aqueous media
- Outstanding defoaming properties during the desalination process

Strong synergy with  
Sokalan® PM 15 I



## Approvals

- Certified by KIWA  
Complies with the FDA regulation  
21 CFR 173.340
- Compliance with specific statutory regulations on request.

## Ecotoxicological properties

- Environmentally friendly:

Bacteria	EC 50 (0.5 h)	>1000 mg/l
Fish ( <i>Leuciscus idus</i> )	LC 50 (96 h)	> 100 mg/l

# BASF boosts your desalination plant!



## **BASF's global headquarters at Ludwigshafen, Germany**

- The world's largest integrated chemical complex
- More than 8,000 high-value products manufactured in an integrated network of 200 chemical plants
- Production site for antiscalants and defoamer

## **BASF runs the biggest R&D site worldwide**

- 8,900 researchers
- Cutting-edge R&D resources
- Specialized in scale inhibition and foam suppression
- Cooperations with universities worldwide



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## Safety

We know of no ill effects that could have resulted from using our products for the purpose for which they are intended and from processing them in accordance with current practice. According to the experience we have gained up to now and other information at our disposal, our products do not exert any harmful effects on health, provided that they are used properly, due attention is given to the precautions necessary for handling chemicals, and the information and advice given in our safety data sheet are observed.

## Labeling

Details about the classification and labeling of our products and further advice on safe handling are contained in the current safety data sheets.

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