Every drop counts:

Sokalan®

Additives
for Thermal Desalination
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

CaCO$_3$ deposits on heat exchanger

**without Sokalan®**
- Deposits of aragonite
- Crystal growth
- Aggregation

**with Sokalan®**
- No CaCO$_3$-crystals viewable
- Blank metal surface

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

Dosing rate (ppm)

- 0.8
- 1.2
- 1.6
- 2.0
- 2.4

BASF Sokalan® PM 15 l with ball cleaning

Top brine temperature (°C)
Sokalan® PM 15 I

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

**Approvals**
- Certified by NSF and KIWA

**Ecotoxicological properties**
- Is not acutely toxic to aquatic organisms

<table>
<thead>
<tr>
<th>Bacteria</th>
<th>EC 50 (0.5 h)</th>
<th>&gt; 1000 mg/l</th>
</tr>
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<tr>
<td>Fish (Leuciscus idus)</td>
<td>LC 50 (96 h)</td>
<td>&gt; 100 mg/l</td>
</tr>
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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

Approvals

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

Ecotoxicological properties

- Environmentally friendly:

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Strong synergy with Sokalan® PM 15 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
Europe, Africa, West Asia

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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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