

**HELAMIN***Innovative corrosion & scale inhibitors
Pioneer in polyamines filming technology*

HELAMIN 906 H C4

THE ENVIRONMENT COMPATIBLE SCALE & CORROSION INHIBITOR FOR THE TREATMENT OF HIGH PRESSURE STEAM BOILERS & HOT WATER SYSTEMS WITH *DEMINERALIZED* OR *SOFTENED* FEED WATER.

The way it works:

A hydrophobic film is formed in the entire boiler system thanks to a molecular bond with the metal surface, thus improving the magnetite structure of the boiler. In addition to excellent metal protection, it also prevents deposits and scale formation.

The entire steam and condensate system is alkalinized then providing an effective protection against corrosion.

Helamin® 906 H C4, as a surface-active organic agent, has outstanding cleaning properties and guarantees the removal of any scale or corrosion contaminants by controlled blow downs.

Advantages:


- ***Use of a combination of environmentally safe agents in a single product.***
- ***Hydrophobic film protects efficiently against corrosion the entire water-steam circuit.***
- ***Heat exchanger surfaces remain clean.***
- ***Formation of calcium and mineral salt deposits in the boiler is prevented.***
- ***Gentle removal of old deposits.***
- ***Dispersal of dirt particles, mineral salts and metallic oxides.***
- ***Alkalinization of the entire water and steam circuit, particularly recommended for hot water systems.***
- ***More efficient heat exchange then saving energy.***
- ***No increase of salt content and reduced blow down.***

Chemical character:

Helamin® 906 H C4 contains a mixture of surface-active polyamines + volatile amines + polycarboxylates that work in a synergetic way, whereas it is free of phosphates and harmful hydrazine.

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2767506015

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HELAMIN FRANCE SARL
135, Rue Thomas Edison - BP 101
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FRANCE

Physical properties:

- Composition: Mixture of polyamines, neutralizing amines & polycarboxylates in aqueous solution.
- Appearance: Light Yellow solution.
- Specific gravity/density: 1.05 ± 0.05 at 20°C
- pH-value: 13 ± 0.5 at 20°C
- Freezing point: -1°C
- Flammability: Non flammable
- Thermal stability: Up to 550°C in water/steam
- Solubility in water: Completely soluble in any proportions.
- pH of 1% solution: 11 ± 0.5 at 20°C
- Neutralizing amines: 25 - 30 % / Cyclohexylamine + 2-Aminoethanol
- Film-forming amines: 2,5 - 5 % / (Z)-N-9 octadecenylpropane-1,3-diamine

Dosage for steam systems:

Hardness Feed water	Quantity per m ³ Make up water	Content in boiler water	Content in condensates
	Standard dosage		
0.01 mmol/l	20 - 25 g	1 - 5 mg / l	1 - 5 mg / l

Recommended dosing criteria:

Helamin® 906 H C4 should always be applied at the concentrations recommended by our technical representative. We recommend the Helamin solution to be diluted with cold treated water and pumped into the feed water **after** thermal de-aerator and before it reaches the feed water pump (90 % of water max.).

Dosage for hot water systems:

The determination of the proper dosage in hot water systems depends on the individual situation. **Helamin® 906 H C4** is applied in the main line. Complex networks may require application at several points.

Analysis:

The residual **Helamin® 906 H C4** concentration can be determined by a simple colorimetric test or spectrophotometer measurement.

Precautions:

Please read the label and consult Material Safety Data Sheet prior handling this product and make sure to wear personal protective equipment.

Packaging and Storage:

It is supplied in non-returnable 30, 60, 210 and 1000 Kg polyethylene containers. Shelf life of sealed product is 3 years provided stored in a confined warehouse with temperature between 5° to 40°C .

The product should be stirred before use after long term storage.

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