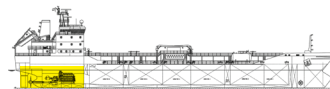


# HARDNESS CONTROL



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## BOILER WATER CONDITIONER PREVENT SCALES DUE TO CALCIUM AND MAGNESIUM SALTS

APPROVED BY



### PHYSICAL DATA

Appearance: White powder  
Flash Point: None  
Ph 1%: 8,8  
Compatibility: No known effect  
Solubility: 100 gr/litre

### DESCRIPTION

HARDNESS CONTROL is a dry phosphates based powder used for the reduction of Hardness in boiler water system, and convert these salts in non adherent sludge.

### APPLICATIONS

The product is formulated to maintain an optimum phosphate level in the boiler, on these conditions calcium and magnesium Hardness salts can not be formed, and the precipitant compounds will be easily blown down.

### DIRECTION FOR USE

- HARDNESS CONTROL should be dissolved in hot water (50°C), solubility of products is 100 gr/litre. Ensure treatment is fully dissolved.
- For optimum results dose HARDNESS CONTROL direct to the boiler via the bypass pot-feeder installed in the boiler water feed line. In low pressure boilers HARDNESS CONTROL may be dosed to the hot well (condensate return tank).

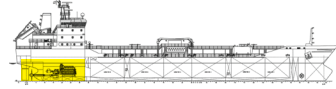
### DOSAGE

Initial dosage for untreated water is 100 gr of HARDNESS CONTROL per tonn. of water. Dosage will be increased or reduced in accordance with result of Hardness and phosphates test. Keep in mind the following recommended limits:

- Hardness value must be zero
- Phosphate value 10/25 PPM for high pressure boiler, for low pressure boiler, 20/40.

Water test can be easily effected with UNIservice test kit, consult our water treatment manual.

# HARDNESS CONTROL

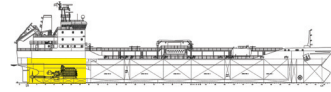


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## 2. Hazards Identification

### 2.1 Substance/Preparation Classification

This product is dangerous under 67/548/EEC and 1999/45/EC directives and subsequent amendments. Therefore, this product requires a safety data sheet according to the Regulation (EC) 1907/2006 and subsequent amendments. Further information on health and/or environmental hazards can be found in sections 11 and 12 of this sheet.

Danger Symbols: Xi  
R phrases: 36/37/38

### 2.2 Danger Identification

IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.

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## 3. Composition / Information on ingredients

Contains:

Name	Concentration % (C)	Classification
PENTABASIC SODIUM TRIPHOSPHATE	100,00 %	Xi R36/37/38
CAS No 7758-29-4		
CE No 231-838-7		

The complete text of -R- phrases is specified in section 16.

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## 4. First aid measures

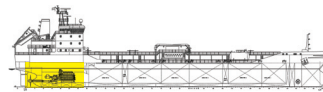
**EYES:** Irrigate copiously with clean, fresh water for at least 15 minutes. Seek medical advice.

**SKIN:** Wash immediately with plenty of water. Remove contaminated clothing. If irritation persists, seek medical attention. Wash contaminated clothing before using them again.

**INHALATION:** Remove to open air. If breathing is irregular, seek medical advice.

**INGESTION:** Obtain immediate medical attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person.

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## 5. Fire-fighting measures

### GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Excess pressure may form in containers exposed to fire at a risk of explosion. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

### SUITABLE EXTINGUISHING MEDIA

The extinction equipment to be used is the conventional kind: carbon dioxide, foam, powder and nebulised water.

### EXTINGUISHING MEDIA WHICH SHALL NOT BE USED FOR SAFETY REASONS

Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

### HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Do not breathe combustion products (carbon oxide, toxic pyrolysis products, etc).

### SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Hardhat with visor, fireproof clothing (fireproof jacket and trousers with straps around arms, legs and waist) work gloves (fireproof, cut proof and dielectric), self-respirator (self-protector).

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## 6. Accidental release measures

### PERSONAL PRECAUTIONS

Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site. If there are no contraindications, spray solid products with water to prevent the formation of dust. Use breathing equipment if fumes or powders are released into the air. Block the leakage if there is no hazard. Do not handle damaged containers or the leaked product before donning appropriate protective gear. For information on risks for the environmental and health, respiratory tract protection, ventilation and personal protection equipment, see the other sections of this sheet.

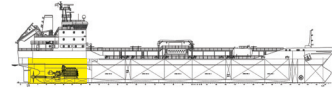
### ENVIRONMENTAL PRECAUTIONS

The product must not penetrate the sewers, surface water, ground water and neighbouring areas.

### METHODS FOR CLEANING UP

Use inert absorbent material (sand, vermiculite, diatomaceous earth, Kieselguhr, etc.) to soak up leaked product. Collect the majority of the remaining material and deposit it in containers for disposal. If there are no contraindications, use jets of water to eliminate product residues. Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

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## 7. Handling and storage

Make sure that equipment is available for cooling the vessels, to prevent the danger of overpressure and overheating in the event of fire in the vicinity. Refer to the other sections of this data sheet for information relating to health and environmental risks.

## 8. Exposure control / personal protection.

### 8.1 Exposure limit values

Not available

### 8.2 Exposure controls

As the use of adequate technical equipment must always take priority over personal protection equipment, make sure that the workplace is well aired through effective local aspiration or bad air vent. If such operations do not make it possible to keep the concentration of the product below the permitted workplace exposure thresholds a suitable respiratory tract protection must be used. See product label for hazard details during use. Ask your chemical substance suppliers for advice when choosing personal protection equipment. Personal protection equipment must comply with the rules in force indicated below.

#### HAND PROTECTION

Protect hands with category II (ref. Directive 89/686/EEC and standard EN 374) work gloves, such as those in PVC, neoprene, nitril or equivalent. The following should be considered when choosing work glove material: degradation, breakage times and permeation. Work glove resistance to preparations should be checked before use, as it can be unpredictable. Gloves' limit depends on the duration of exposure.

#### EYE PROTECTION

Wear protective airtight goggles (ref. standard EN 166).

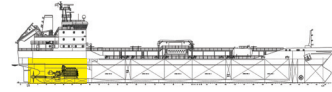
#### SKIN PROTECTION

Wear category II professional long-sleeved overalls and safety footwear (ref. Directive 89/686/CEE and standard EN 344). Wash body with soap and water after removing overalls.

#### RESPIRATORY PROTECTION

If the threshold value for one or more of the substances present in the preparation for daily exposure in the workplace or to a fraction established by the company's prevention and protection service is exceeded, wear a mask with an B or universal filter, the class (1, 2 or 3) of which must be chosen according to the limit concentration of use (ref. standard EN 141).

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The use of breathing protection equipment, such as masks with organic vapour and dust/mist cartridges, is necessary in the absence of technical measures limiting worker exposure. The protection provided by masks is in any case limited.

If the substance in question is odourless or its olfactory threshold is higher than the relative exposure limit and in the event of an emergency, or when exposure levels are unknown or the concentration of oxygen in the workplace is less than 17% volume, wear self-contained, open-circuit compressed air breathing apparatus (ref. standard EN 137) or fresh air hose breathing apparatus for use with full face mask, half mask or mouthpiece (ref. standard EN 138).

An emergency eye washing and shower system must be provided.

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## 9. Physical and chemical properties

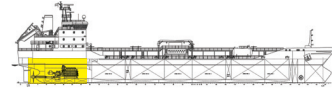
Colour	Not available
Odour	odour less
Appearance	powder
Solubility	soluble
Vapour density	Not available
Evaporation speed	Not available
Comburent properties	Not available
Partition coefficient: n-octanol/water	Not available
pH	10
Boiling point	Not available
Flash point	Not available
Explosive properties	Not available
Vapour pressure	2000kPa
Specific gravity	1,000Kg/l

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## 10. Stability and reactivity

The product is stable in normal conditions of use and storage. Due to thermal decomposition or in the event of a fire vapours may be produced potentially dangerous to health.

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## 11. Toxicological information

Acute effects: stinging eyes. Symptoms may include rubescence, edema, pain and lachrymation. Vapour inhalation may moderately irritate the lower and upper respiratory tract and cause cough and respiratory disorders. At higher concentrations, it may also cause pulmonary edema. Contact with skin may cause irritation, erythema, dryness and chapped skin. Ingestion may cause health problems, including stomach pain and sting, nausea and sickness.

---

## 12. Ecological information

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or sewers or contaminate soil or vegetation.

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## 13. Disposal consideration

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

### CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

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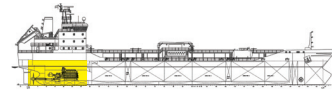
## 14. Transport information

This product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

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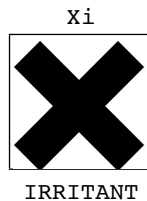


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## 15. Regulatory information



- R36/37/38 IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.  
S26 IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.  
S28 AFTER CONTACT WITH SKIN, WASH IMMEDIATELY WITH PLENTY OF . . . (TO BE SPECIFIED BY THE MANUFACTURER).  
S36/37/39 WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE PROTECTION.

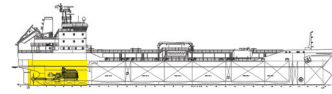
Contains:  
PENTABASIC SODIUM TRIPHOSPHATE

Nr. EC: 231-838-7

Danger labelling under directives 67/548/EEC and 1999/45/EC and following amendments and adjustments.

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

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## 16. Other information

Text of (R) phrases quoted in section 3 of the sheet.

R36/37/38 IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.

### GENERAL BIBLIOGRAPHY

1. Directive 1999/45/EC and following amendments;
2. Directive 67/548/EEC and following amendments and adjustments (technical adjustment XXIX);
3. Regulation (EC) 1272/2008 (CLP) of the European Parliament;
4. Regulation (EC) 1907/2006 (REACH) of the European Parliament;
5. The Merck Index. - 10th Edition;
6. Handling Chemical Safety;
7. Niosh - Registry of Toxic Effects of Chemical Substances;
8. INRS - Fiche Toxicologique (toxicological sheet);
9. Patty - Industrial Hygiene and Toxicology;
10. N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition;

### Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product . This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Changes to previous review

The following sections were modified:

08