

Water Services LTD

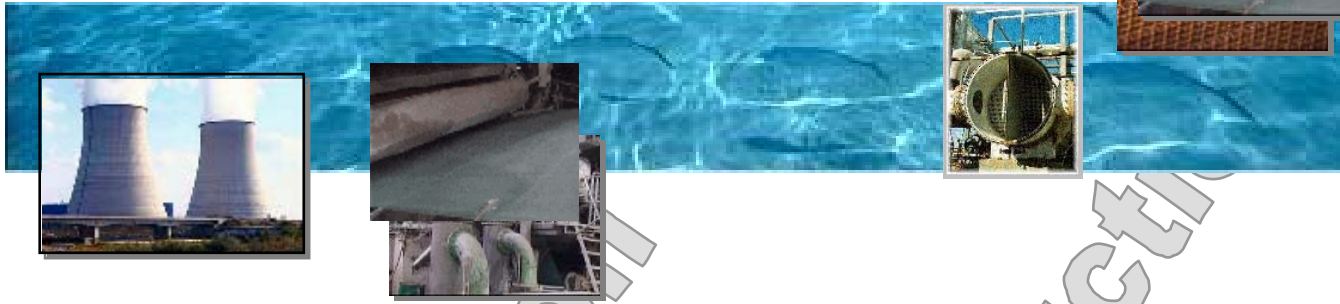
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attachments



WSC® 6870

Scale & corrosion inhibitor

Use

WSC® 6870 deposit and corrosion inhibitor is recommended for the control of corrosion and deposition in open recirculating cooling water systems.

WSC® 6870 is also the product of choice in semi-closed water systems or systems characterized as closed, but featuring significant water losses.

The product is formulated to control deposition of hardness salts and minimize corrosion of mild steel and copper alloys.

WSC® 6870 is suitable in hard alkaline cooling waters, here the use of traditional inhibitors such as phosphates and zinc is not acceptable.

Features

WSC® 6870 is a liquid combination of organophosphorus compounds and anionic polymeric dispersants.

WSC® 6870 does not contain any heavy metals such as chromium, zinc or molybdenum or controversial inhibitors such as phosphate, phosphate esters and nitrites.

WSC® 6870 is suitable for use in a wide variety of cooling water systems where it provides excellent corrosion and deposit protection with a very low level of environmental impact.

Appearance

Hazy brown liquid

Density (kg/m^3): 1100 -1240

pH: > 10,5

Freezing point: < 1°C

These data are to be seen as typical values and should not be considered as specifications.

Feeding

The product dosage will depend on the type of system, operating conditions and the quality of make-up water.

The recommended feeding method is continuously as received to a cooling water line or cooling tower basin.

WSC® 6870 is an highly alkaline material and therefore corrosion resistant feeding equipment should be used.

Handling precautions

Wear suitable protective dothing, goggles and gloves.

WSC® 6870 is a skin irritant and eye irritant.



In case of contact immediately flush with water for 5 - 15 minutes. After eye contact seek medical advice.
Do not swallow.
Before use review the Material Safety Data Sheet for additional information.

Transport classifications

A.D.R. : None
IMCO : None
U.N.nr. : None

Labelling for Handling

Symbol : Xi; irritating
R-phrases : 36/38
S-phrases : 26, 37/39

Packaging

WSC® 6870 is packed in 25 kg jerrycans, 125 kg and in 220 kg PE drums.

Draft for evaluation purposes
not for distribution or reproduction



WS[®] 7430

Scale inhibitor

Use

WS 7430 is a synergistic blend of anionic polymeric sequestrants, dispersants and organic sequestering agents of phosphonate type.

It is recommended for deposit inhibition in industrial water systems like recirculating cooling systems, cooling towers, waste water streams facing deposition problems etc.

Almost mineral scales can be inhibited by **WS 7430** like Calcium Carbonate, Fe and Mn based scales, CaF₂ etc.

Features

WS 7430 is a very concentrated, synergistic blend resulting in low dose rates and normal use cost.

WS 7430 is suitable for use in waters containing high solids amounts, like scrubbers and paper mill applications.

Appearance

Clear colourless to yellow

Density (kg/m³): 1120 -1240

pH: 4

Freezing point : < -4°C

These data are to be seen as typical values and should not be considered as specifications.

Feeding

For most applications a continuous treatment level of 0.5 - 5.0 ppm of **WS 7430** in the make-up water is acceptable. However, optimum dosage will depend on the nature and severity of fouling and the operational parameters of the system.



WS 7430 is a mildly acidic material and therefore corrosion resistant feeding equipment should be used.

Handling precautions

Wear suitable protective clothing, goggles and gloves.

WS 7430 is a mild skin irritant and moderate eye irritant.

In case of contact immediately flush with water for 5 -15 minutes. After eye contact seek medical advice. Do not swallow. Before use review the Material Safety Data Sheet for additional information.

Transport classifications

A.D.R. : Not classified

Labelling for Handling

Symbol : Xi; irritating
R-phrases : 36/38
S-phrases : 26, 37/39

Packaging

WS 7430 is packed in 220 kg PE drums.

WS 8738

Antifoulant - Dispersant - Surfactant

Use

WS 8738 antifoulant is a liquid, hydrolytically stable, non-ionic dispersant designed for use in water systems.

WS 8738 is highly effective over a wide pH and temperature range in dispersing oil, silt, sludge, clay and dead bio-matter occurring in water systems. It will remove deposits, which reduce heat transfer and lead to underdeposit corrosion attack.

When used in conjunction with a microbicide, **WS 8738** improves the penetration of the microbicide and contributes to better, more economical bacterial control.

FEEDING:

The exact dosage of **WS 8738** will depend on a number of factors such as the nature and concentration of suspended solids and the degree of surface fouling already present.

- Routine maintenance control may be achieved by adding 20-100 ppm either continuously or as a shock charge.
- Severely fouled systems may be cleaned using concentrations of 50-5,000 ppm.

Your local representative will provide detailed information.

WS 8738 may be fed directly from the drum or as an aqueous dilution to any suitable point in the system. For large systems local addition to the inlet





pipework of specific heat exchangers might be appropriate.

HANDLING PRECAUTIONS:

Avoid contact with skin and eyes. For further information refer to Material Safety Data Sheet (MSDS).

Packaging:

WS 8738 is packed in 25 kg jerrycans and in 210 kg drums.



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Statements or suggestions concerning possible use of this product are made without representation or warranty that any such use is free of patent infringement and are not recommendations to infringe any patent.



DESCRIPTION APPLICATIONS

A liquid, single-feed bromine biocide, used in combination to the chlorination, as to give to chlorine the power of chlorobromination.

By this procedure, common chlorine becomes an extremely strong disinfectant, fungicide, algicide and/or slimeicide for wastewater, commercial and industrial recirculating cooling water systems and industrial once-through cooling water systems, without any harmful environmental side effect. It is also used to control biofilm deposits in pumps, pipes, heat exchangers and filters associated with industrial water treatment systems.

FEATURES

This powerful broad spectrum biocide effectively and quickly controls bacteria, algae and fungi through NaOBr action.

NaOBr is a powerful broad spectrum biocide recommended for disinfection of recirculating and once-through cooling systems, food processing equipment (pasteurisers, sterilisers or retorts), air washers and other industrial water systems.

BDS BIOBROM Q is recommended for alkaline (7,5 < pH < 9,5) and contaminated waters (NH₃ and nitrogen), where chlorine is not giving efficient microbial control.

NaOBr remains active in alkaline waters (pH = 7,5-9,5) resulting in more efficient disinfections than when using chlorine based biocides.

BDS BIOBROM Q suffer less from flash-off losses (compared to chlorine based biocides).

BDS BIOBROM Q offer all advantages of bromine chemistry combined with the ease of dosing: there is no need for labour intensive and complex feed equipment, simple dosing pumps are sufficient.

FEEDING

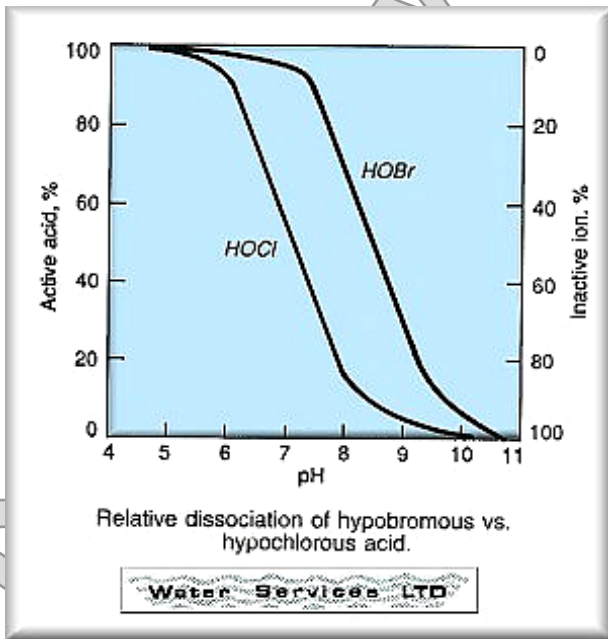
The product dosage rate will depend on system design, water characteristics and operational parameters. In most of the application a residual in 0.2 – 0.5 ppm of residual free available halogen is sufficient to keep the control of the system. For additional information, please contact your local Water Services Ltd representative.

HANDLING PRECAUTIONS

Wear suitable protective gloves and safety goggles. In case of contact immediately flush with plenty of water. After eye contact seek medical advice.

In case of spillage, absorb with sand or other absorbent material and sweep up. Then flush the area with water.

Before use review the Material Safety Data Sheet for additional information.

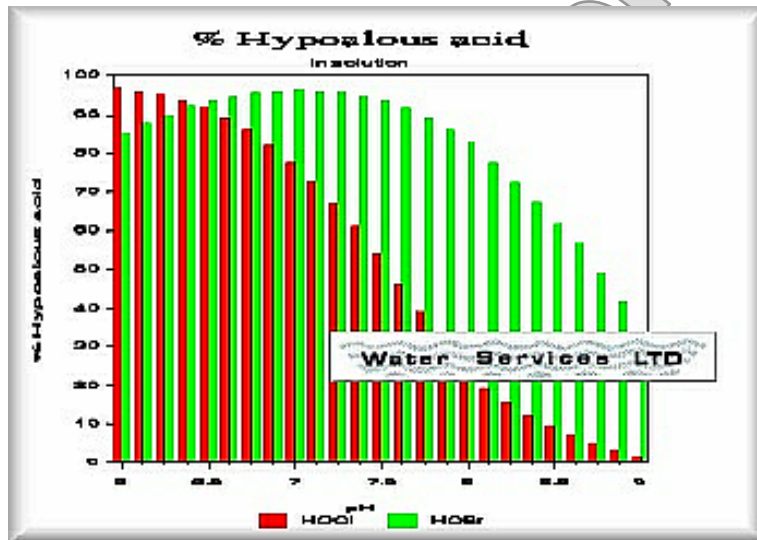


SOLUBILITY

Freely soluble in water.

END-USE COMPATIBILITY

BDS BIOBROM Q is compatible with HDPE, PP, PTFE, PVC, VITON, iron, aluminum, carbon steel and copper when used per label directions.



(Halogenated Complex, Sodium Hydroxide)

Hazard class: 8

I D number: UN3266

Label/placard: corrosive w/ number 8

Packing Group: III

Safety and Handling Information

For specific safety, handling and toxicity information, please refer to the current Material Safety Data Sheet.

STORAGE REQUIREMENTS

Neat **BDS BIOBROM Q** can be stored in HDPE, LDPE & PP containers. Do not store **BDS BIOBROM Q** in iron, aluminum, brass, stainless steel, carbon steel or copper containers, or in direct sunlight.

CONTAINER INFORMATION

Available in bulk, totes and drums

SHIPPING CLASSIFICATIONS

Proper shipping name:
CORROSIVE LIQUIDS, BASIC,
INORGANIC, N. O. S.

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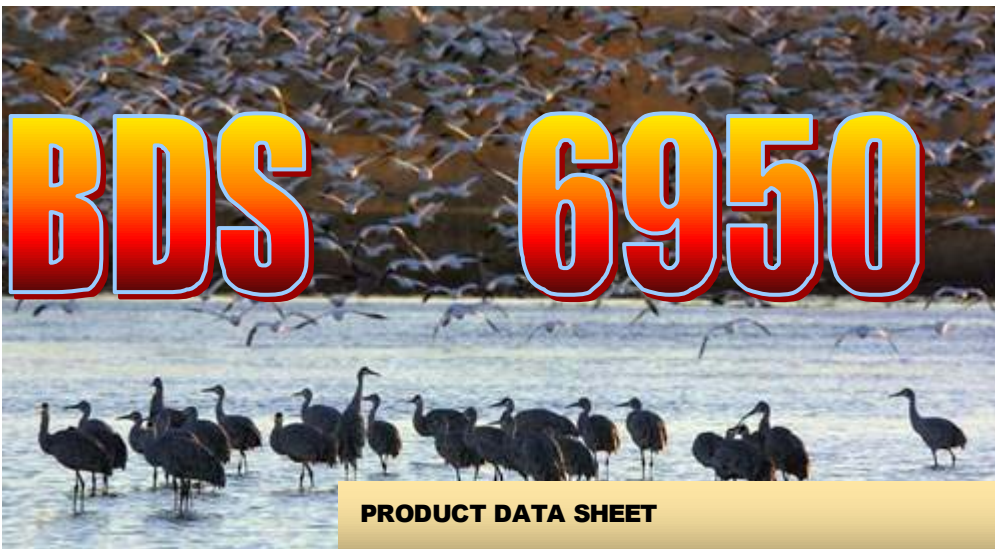
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Statements or suggestions concerning possible use of this product are made without representation or warranty that any such use is free of patent infringement and are not recommendations to infringe any patent.

BDS 6950



PRODUCT DATA SHEET

microbiocide

Purpose

BDS 6950 is the product of choice when fast deactivation is required, as to prevent mutagenecies.

BDS 6950 is a high performance industrial microbiocide for use in closed recirculating water systems, cooling towers, power station circuits, wood, mold and mildew control, pulp and paper mills, oil field injection waters air washer, air conditioning and food processing systems.

BDS 6950 has extremely broad spectrum activity, controlling bacteria, fungi and yeasts without affecting product physical properties. Very low use levels make **BDS 6950** one of the most cost effective solutions on the market.

BDS 6950 is very effective in controlling the typical bacteria and fungi, but also offers compatibility with papermaking chemicals and equipment, and convenient handling properties.

Chemical Composition

BDS 6950 is comprised of two primary active compounds, 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-4-isothiazolin-3-one, in a dilute aqueous solution that permit easy and safe handling.

- **Active Ingredients** % WT/WT
 - 5-Chloro-2-methyl-4-isothiazolin-3-one 1.11%
 - 2-Methyl-4-isothiazolin-3-one 0.40%

Advantages

- **Compatibility**

BDS 6950 Isothiazolinones are generally compatible with most components of industrial formulations.

- **Biocidal Performance**

BDS 6950 is a highly cost effective biocide preservative due to the low use levels required.

- **Rapid inhibition of macromolecular synthesis (proteins, RNA, etc.)**
- **Synergistic with halogen, not pH sensitive**
- **Minimize environmental concerns**
- **Meets FDA requirements**

BDS 6950 meets the requirements of the Food and Drug Administration (FDA) for use as a slimeicide in the manufacture of paper and paperboard, intended to contact food (21 CFR 175.500 and 175.320)

- **Recommended method of addition**

You can feed **BDS 6950** with a metering pump at any point where uniform mixing can be attained. Use corrosion resistant equipment.

BDS 6950 can be added continuously or periodically, with adjustments in the intervals between additions and dose levels dependent on visual inspections, microbiological analyses, and/or experienced observations of a water treatment representative.

- **Treatment levels**

For closed systems a normal feeding of a 25 ppm shock once to twice a month is normally sufficient.

For cooling towers and air washers shock of 25 ppm twice a week is recommended.

For the control of bacterial, fungal, and yeast growth in pulp, paper, and paperboard mills, add **BDS 6950** at the rates of 50 to 150 gr / tn of dry paper.

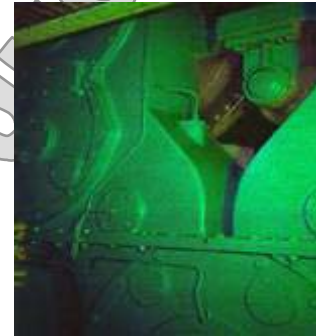
Typical Properties

- Appearance Clear Liquid
- pH 1.5 - 3.5
- Odor Mild



Safety

Avoid breathing vapours. Wear suitable protective gloves and safety goggles. In case of contact immediately flush with water. After eye contact seek medical advice. Small spills can be flushed with water. Large spills should be collected for disposal. Read carefully the Material Safety Data Sheet (MSDS) before use.

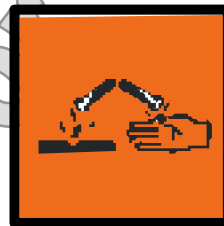


Transport classifications

A.D.R. : 8 – 40b
 IMDG : 8147
 U.N.nr. : 3265 – II

Labeling

Symbol : C CORROSIVE
 R-phrases : 43 34
 S-phrases : 26, 28, 36/37/39, 45



Packaging

BDS® PM-6950 is packed in 30 kg jerrycans and 240

kg PE drums.

All statements, information and data presented herein are believed to be accurate and reliable but are not to be taken as a guarantee, express warranty or implied warranty of merchantability of fitness for a particular purpose, or representation, express or implied, for which seller assumes legal responsibility, and they are offered solely for your consideration, investigation and verification. Statements or suggestions concerning possible use of this product are made without representation or warranty that any such use is free of patent infringement and are not recommendations to infringe any patent.