

MANUFACTURED IN GERMANY

# ISOFT® - DESCALER HEAVY-DUTY CLEANING AGENT

# Cleaning + Disinfecting Industrial Water Systems including

#### Cooling Water and Boiler Water Systems

#### Features:

- Heavy Duty Industrial Water Treatment Compound
- Recalculating any water system cleaner
- Scale & Corrosion prevention, Dispersant & Cleaner









Operation mode

Method of simultaneous Cleaning and Disinfection ON-LINE

**OFF-LINE** 



- No Phosphates or Phosphonates
- Disinfect the system from microbial growth
- 100% Biodegradable formulation
- Prevents bio-film development



#### INSTANT Dosing Technology: Future of Waterless Chemicals

Protecting any Water Treatment Systems against CORROSION

SCALE BIOFOULING

Watch® **INSTANT** Dosing chemicals is the latest achievement in **INSTANT** (Solid) feed water chemistry that not only allows precision dosage in water treatment applications but also provide an Green Eco-Friendly program that minimizes the handling of chemicals, eliminates the need for chemicals storage problems, eliminates spills and liquid container disposal costs and minimizes shipping costs – all of which saves your budget and reduces

your facility carbon foot-print! Using **INSTANT Dosing** & **INSTANT** Cleaning is the way you could help to save this planet from hazardous chemicals. **INSTANT** Dosing is the most innovative way to use-time-proven chemistry.



One bag is equivalent to 4 x 25 liters of dosing chemical (approx 105 kg)



Standard Packaging is 4 x 5 kg bags in a box, which can provide dosing solutions of 400 liters (approx. 420 kg)

#### Introduction:

I-SOFT® DESCALER removes deposits of scale and destroys microorganisms. The composition of chelating agent, Corrosion inhibitor, biocides and reducing agent including acids can clean variety of industrial and water systems including cooling towers, boilers and heat exchangers water systems. The reaction of Alkaline ISOFT and Acids produces very high amount of acidic reaction and removes strong deposits of Scales and Rusts as well as providing disinfection in the process.

Fouling, Scaling & corrosion can occur even with the best water treatment using Phosphates, Phosphonates or other methods currently available. Fouling is defined as "Deposition of any organic or material on a surface". If these industrial water systems are not periodically cleaned then thev will become heavily fouled. Phosphates. Phosphonates means dosing nutrients and offer protection for the growth of bio-life and bio-films which can accelerate SCALE, CORROSION and many other fouling processes.



Not only these Phosphates, Phosphonates contribute to grow bio-films which reduces the system efficiencies but they also provide an excellent environment for microbial proliferation that can include Legionella bacteria. It is therefore very important to **STOP DOSING PHOSPHATES** PHOSPHONATES to the greatest extent possible to minimize the health-related risk associated with Legionella and also **Eutrophication** and many other water-borne pathogens.





## WATCH WATER® A Water Company

#### Description:

**INSTANT** I-SOFT®-DESCALER is a Powder alkaline, triple purpose product. I-SOFT®-DESCALER is a proprietary blend of very special organic I-SOFT chelates designed to remove gently and effectively remove scale and metal oxides from a very wide range of open, closed re-circulating cooling towers, heating water systems, boilers, heat exchangers and any other industrial water systems.

Advantages: 100% Biodegradable!

I-SOFT®-DESCALER is the product of right choice for "ONLINE" clean up jobs. It will solubilize and disperse oil, grease, mill scale,

#### Applications:

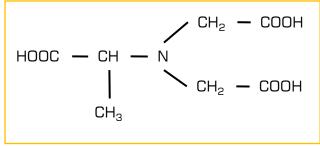
I-SOFT®-DESCALER can be employed in a very wide range of different applications. It is a strong complexing product which is used to control the concentration of metal ions in aqueous systems.

Applications	Mode of Action
Removing Scale while dosing in any application – water softener is not needed anymore.	Displaces the equilibrium by sequestering metal cations.
Dissolving Calcium Carbonate Scale  • 10 kg Calcium carbonate (lime scale) generates 2.2 $\rm m^3$ of $\rm CO_2$ gas when it is dissolved with  • $\rm HCl$ • $\rm H_2SO_4$ -or any other acids	Advantages: The I-SOFT®-DESCALER is the highest binder for Calcium & Scale which enables it to dissolve existing calcium scale and at the same time will not allow to form any kind of new scale.
Acid such as hydrochloric acid and sulfuric acid or citric acids are corrosive to all metals in-  • Cooling Towers  • Boilers  • Heat Exchangers  • Chillers	The I-SOFT®-DESCALER displace the equilibrium of precipitation reaction by sequestering the calcium cations.  The I-SOFT®-DESCALER has the highest affinity for Calcium, Magnesium compared to weak complexing products like  • Phosphates • Phosphonates • FDTA or NTA

rusts, mineral scale, mud and organics that can foul new and old water systems including the complete piping system. I-SOFT®-**DESCALER** is absolute non-corrosive product that will passivate and protect system metals from corrosion. In old and heavily fouled systems, deposits are not removed so rapidly that plugging occurs. In these systems clean time can range from 6 weeks for closed loop and 12 weeks for heavily scaled cooling towers. I-SOFT®-DESCALER contains a green acid but no Heavy Metals like molybdenum or Phosphates as well as phosphonates.

#### Properties:

The active acid/the main ingredient contained in the I-SOFT®-DESCALER is the amino-carboxylic acid with four functional groups.



Known as α – alaninediacetic acid

Physical appearance	Granules, coarse, yellowish
Free acidic concentration	60%
рН	9.5 in 1% solution
Bulk density	1000 g/liter
Calcium binding capacity	310 mg/g
Solubility in water	550 g/liter

#### Complex formation

The most important property of I-SOFT®-DESCALER is its ability to form water soluble complexes with polyvalent ions. These are Calcium, Magnesium, Lead, Copper, Zinc, Cadmium, Mercury, Manganese, Iron etc. over a wide range of pH (2 to 13.5). These formed complexes remain stable, especially in alkaline media and even at temperature of up to 110 °C (230 °F). No other complex binder has this ability.

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#### Tribasic acid (only in the world)

I-SOFT®-DESCALER is the only acid in the world that dissociates in **three steps**. The acid dissociation constants competes for metal ions with other <u>Anions</u> such as hydroxides, sulfates, sulfide, carbonates and oxalate that

form sparingly soluble metal salts. The result is that the salts cannot precipitate and redissolve in any <u>ON-LINE Cleaning Application</u> and <u>OFF-LINE Cleaning Application</u> as well.



The I-SOFT®-DESCALER reduce the concentration of free metals ions in any aqueous solution in any water treatment system



THREE

The I-SOFT®-DESCALER is working as the water softener without adding phosphates or harmful sodium. I-SOFT®-DESCALER soften the scale and re-dissolve even stubborn scale.

The I-SOFT®-DESCALER modifies the reactivity metal ions in water.

I-SOFT®-DESCALER has excellent chemical stability under a wide range of conditions and this ensures that it remains effective over long periods. It has minimum 2 years of shelf-life.

#### Direction of use:

The quantity of I-SOFT®-DESCALER that is required to remove or sequester a given concentration of Calcium, Iron or any ions involved in Organic scale, Inorganic scale – depends on the strength of I-SOFT®-DESCALER.

I-SOFT®-DESCALER is slug/hand dosed to the fouled, Scaled or Absolutely newly constructed system at 10 liters per 10,000 liters of system for "ONLINE" cleanup.

- The pH should be maintained at 7.5 all the time.
- System should be placed into <u>normal</u> <u>operation</u> or circulation for cleanup period.
- Closed loop systems should be checked weekly.
- Flush systems with "ONLINE BLEED" when pH reaches 8.5
- Repeat this procedure until the system water remains clean for one week of system operation with of I-SOFT®-DESCALER applied.
- Cooling towers should be drained and flushed after recirculation as VISUAL INSPECTION-DICTATES. Bleed should be reopened after the first few days of system recirculation. Thereafter, a continuous dosing/injection or if needed slug additions must be made for as long as two to three months to look the system as Brand New. Periodic flushing of the system to remove sludge and loosened contamination will be necessary.

#### Dilution:

 $1:19 = 20 \text{ kg/kg } \text{I-SOFT}^{\circ}\text{-DESCALER}$  (5% Strength)

#### Handling & Safety:

The I-SOFT®-DESCALER does not exert and harmful effects on health, provided that they are used properly, due attention is given to the preventions necessary for handling chemicals.

#### Packaging:

- 1 kg Pouch 20 x 1 kg Pouches in a box
- 5 kg Pouch 4 x 5 kg Pouches in a box
- 60 kg Drums

Minimum Order Quantity 20 kg (a box)

#### Storage:

**I-SOFT®-DESCALER** is hygroscopic and it should be kept in tightly sealed containers.

✓ I-SOFT®-DESCALER is classified as "readily biodegradable".

#### Manufactured by:



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