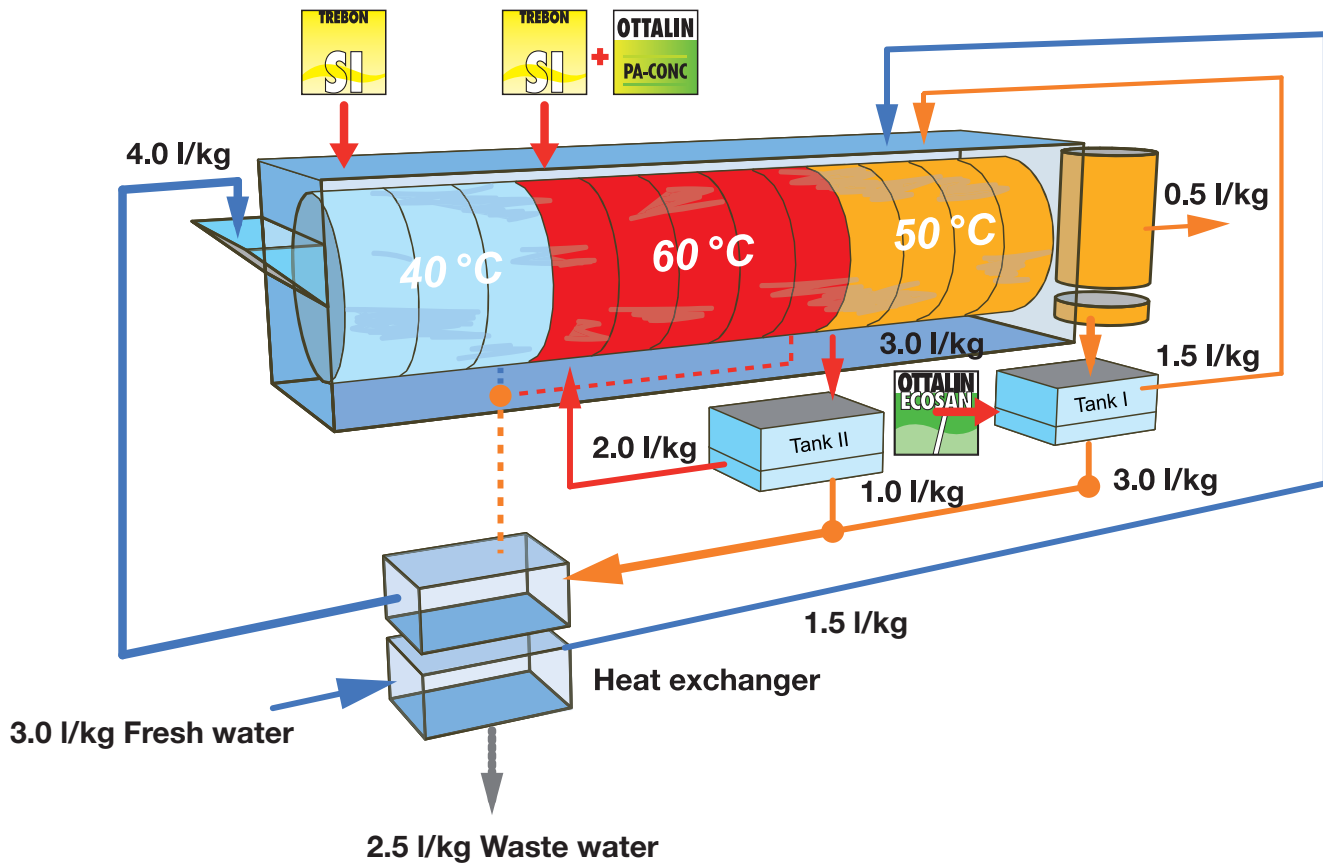


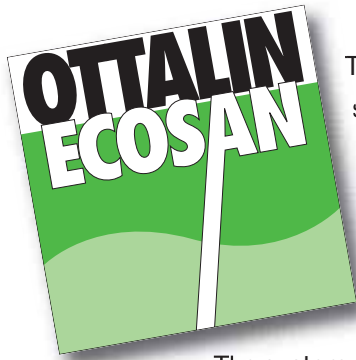
## The ECOSAN 3 litre procedure



**Utmost efficiency for cost effectiveness and quality**

# ECOSAN 3 litre

## The ECOSAN 3 litre procedure



The ECOSAN 3 litre procedure is the systematic further development of the approved ECOSAN procedure with the aim of further savings of water, energy, and detergents – without loss of quality.

The system consists of two essential components: the typical ECOSAN procedural sequence that allows the rinsing and press water to be reused, and the special product OTTALIN ECOSAN that effects the com-

plete oxygen breakdown required for the procedure. OTTALIN ECOSAN has been developed particularly for breaking down the oxygen contained in the rinsing and press water of disinfecting washing procedures so that these valuable liquors can be reused. OTTALIN ECOSAN is quick acting and safe: no salinization of the water circulation, no crystallization in containers and pumps, no fixation of albumin stains, and no residues on the textiles. Furthermore, OTTALIN ECOSAN has a neutral scent and is free of organic sulphur compounds.

The ECOSAN 3 litre procedure is based on the combination of optimized water circulation control with heat exchangers in the washing line with the introduction of precisely coordinated detergents, disinfectants, and auxiliary agents:

- ✓ A carefully targeted dosage of highly active detergents in the prewashing and main washing cycles ensures the complete removal of stains and provides impeccable cleanliness of the laundry.
- ✓ Due to the special procedure control, the effect of the disinfecting and bleaching agents is expanded even to the press area to effectively protect the laundry from being infected with any micro-organisms present.
- ✓ The press and rinsing water is regained completely. OTTALIN ECOSAN decomposes the active oxygen remaining in the baths perfectly so that the baths can be reused in the prewashing and main washing cycles. The fresh water preheated via heat exchangers is used completely in the rinsing zone for the benefit of the textiles that remain residue-free and soft.
- ✓ The quick action of OTTALIN ECOSAN eliminates problems with the reuse of the water from the rinsing and press zones, which allows the detergents to develop their effect so that even albuminous stains are removed completely

**The ECOSAN 3 litre procedure ensures hygienically and impeccably clean laundry in the public health and hospitality industries!**

### Description of the water cycle:

- 3.0 l/kg (0.36 gal/lbs) fresh water heated to 45–50 °C (113–122 °F) in the heat exchanger completely in the rinsing zone together with 1.5 l/kg (0.18 gal/lbs) press water from tank 1.
- 3.0 l/kg (0.36 gal/lbs) press water mixed with OTTALIN ECOSAN from tank 1 and 1.0 l/kg (0.12 gal/lbs) clear water from tank 2 with fresh water cooled down in the heat exchanger to 40 °C (104 °F) in the prewashing zone.
- 2.0 l/kg (0.24 gal/lbs) clear water from tank 2 for liquor completion in the main washing zone.
- 2.5 l/kg (0.3 gal/lbs) waste water (60 °C, 140 °F) from the prewashing and main washing zone via heat exchanger for heating the fresh water.

### ECOSAN – for effective hygiene

The ECOSAN 3 litre procedure is particularly suited for use in high hygiene demand areas as it expands the effect of the disinfectant from the main washing zone beyond the rinsing process to the press, thereby effectively protecting the laundry from being infected with germs. This ensures perfect top-level care – in nearly all given washing lines.

### ECOSAN – for high washing quality

The ECOSAN 3 litre procedure is particularly thorough. The reuse of the unused surfactants from the rinsing and press water and the precise, washing condition-related dosage of detergent in the prewashing and main washing cycles ensure the reliable and residue-free removal of albumin stains and dirt for thorough cleanliness.

### ECOSAN – for low costs

The ECOSAN 3 litre procedure is particularly cost-efficient. It uses less fresh water, less detergent, and less heating energy as heat exchangers transfer the heat content of the rinsing and press water to the fresh water. Therefore, the valuable rinsing and press water can be regained effortlessly even for disinfection procedures to be reused completely for prewashing and main washing. Only 3 litres of fresh water per kilogram of textiles is required for the washing process, and this fresh water is used exclusively for rinsing.

The **ECOSAN 3 litre procedure** is extremely economical as it saves water, energy, detergent, and chemicals – a real advantage for total costs!

### ECOSAN – for well-cared textiles

The ECOSAN 3 litre procedure is particularly gentle on any textile as the active oxygen is removed quickly and reliably from the rinsing and press water – without salinization of the washing liquor and without deposits on the laundry! The textiles are therefore easy to iron and remain soft, absorbent, and supple throughout their entire life.

### ECOSAN – for the environment

The ECOSAN 3 litre procedure is particularly environmentally-friendly as it is the first procedure to allow the easy recovery of the rinsing and press water and its heat content. The complete elimination of the need for fresh water in the prewashing and main washing cycles has benefits for consumptions: A substantial reduction of overall water consumption, amount of wastewater, energy as well as the total amount of chemicals used.

Use biocides safely.  
Always read the label and product information before use.



## Your advantages:

- ✓ ONLY 3 liters fresh water per kilogram of textiles processed
- ✓ Fresh water used only for rinsing
- ✓ Washing at only 60 °C (140 °F)
- ✓ No salinization in the rinsing cycle
- ✓ No active oxygen in the prewashing cycle
- ✓ Increased safety due to active oxygen in the rinsing cycle
- ✓ Reduction of energy consumption by 50 %
- ✓ Reduction of water consumption by 50 %

## Competent and efficient in textile chemistry and hygiene

Kreussler is a medium-sized German traditional company of the chemical industry that has been family-owned since its foundation in 1912. Today's branches, textile chemistry and pharmacy, have evolved from the original business.

The field of interest for the textile chemistry branch is the commercial textile cleaning in its entirety: dry cleaning, wet cleaning, and industrial washing. The global operation of Kreussler is geared to the making of highly effective products in combination with competent applications engineering.



### Optimal support and consulting

Working closely with you and your team, we will develop a system that ensures productivity and safety for your business. The applied products and procedures will be customized perfectly to suit your company and your needs giving the highest regard to efficiency and safety.

### Absolute cost transparency

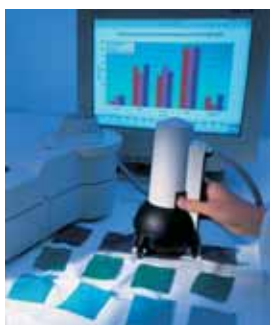
From the offer to products to procedure – the customer can always keep track of the exact costs and his savings.

### Quality

Specially trained employees, the Quality Management System ISO 9001:2000 as well as the Environment Management System DIN-EN 14001 ensure consistent, traceable quality.

### Procedural safety

The procedures developed by Kreussler are reviewed at regu-



lar intervals in order to ensure procedural safety and to achieve optimal results. During the service calls, the parameters of the washing process are checked and optimized.



All changes are documented; they are always traceable and up-to-date. The use and evaluation of standardized test strips ensure the validation of the procedure with regard to safety and quality.

### Dosing equipment

The exact dosage of the products during the procedure constitutes an essential factor for its efficiency.

The dosing equipment of Kreussler is customized for your business and ensures a dosage that harmonizes perfectly with the procedure and the textiles.

### Eco conscious washing

With their highly concentrated products, Kreussler ensures savings in product, water, and

energy consumption. The products have been dermatological tested; they are exactly dosable as well as biodegradable and have been designed according to the most recent legal requirements.

### Reliable service ... by telephone

For ordered goods, a short delivery time is often of essential importance. Emergency orders are processed expediently. Our service department ensures straightforward, smooth processing and delivery of each order whether it is a rush, forward or standard order.

And for absolute emergencies, we have logistic solutions at hand.

### ... personally

Our trained service technicians are on the spot whenever they are needed: quickly and without delay. Depending on the laundry's size and type of textiles, our field representatives compile a periodical service schedule for you to ensure trouble-free operation.