



## TM SMART CIP

**HIGHLY CONCENTRATED, LIQUID ALKALINE CLEANER FOR ALL KIND OF BEER AND BEVERAGE LINES. VERIFICATION OF CLEAN BY MEANS OF COLOR CHANGE: PURPLE MEANS CLEAN**

### COMPOSITION AND DESCRIPTION

TM SMART CIP is an intelligent CIP-cleaner with integrated colour-change-effect. This technology provides dissolution properties for organic deposits like proteins, fats, saccharides, aromas, phenol compounds and oxalates by means of oxidation by hydroxyl radicals. It can also be used to detect organic deposits in pipe systems, vessels, tanks, heat exchangers or filling lines by means of a color indication system.

COLOR	purple/magenta liquid
APPLICATION TEMPERATURE	up to 70 °C (160 °F)
SPECIFIC GRAVITY	1,24 - 1,27 g/cm <sup>3</sup>
pH- VALUE (1% solution bei 20 °C)	12,5 - 14
SHELF LIFE	18 months from date of production
STORAGE	store in cool, dark environment

### AREAS OF USE

- Filling lines in the fruit juice or canning industry, dairies, delicatessen production
- Pasteurisation equipment for juices, fruit concentrates and functional drinks
- Cooking vessels for soup or sauce production
- Homogenisers and UHT equipment
- Heat exchangers in the brewery or winery
- Filling and production lines in the soft drink and mineral water industry

### APPLICATION

1. Pre-Cleaning/CIP: Apply TM SMART CIP as alkaline pre-cleaning step (CIP) in order to remove higher quantities of remaining fatty and solid product deposits. The aim of this pre-cleaning step is to remove heavy soiling from the plant.
2. Verification step with TM SMART CIP: Prepare a 1-2 % solution by adding the concentrate to hot water of 60 °C (140°F). The solution has to be prepared in a clean tank. When using iron containing water TM SMART CIP provides a complete iron precipitation in the preparation tank. That's how iron deposits in the pipe system are consequently avoided.
3. In the return flow or at the end of the pipe system a color change to GREEN or YELLOW can be fully automatically captured. This color change visualizes the powerful start of the oxidation effect on organic substances. A constant (purple) color of the verification solution is a reliable indicator for an organic-free system. That's why the VIOLET color indicates the cleanliness of the system.
4. Rinse off the system with hot water or with micro filtered fresh water until pH is neutralized.



## ADVANTAGES OF THE TM SMART CIP TECHNOLOGY

### MAXIMIZING THE BENEFITS

- online quality control during the CIP cleaning procedure
- highly concentrated premium caustic blend
- easy rinsing - TM SMART CIP does not contain any surfactants.
- Reliable technology! Facilitates HACCP-verification.
- Provides safe reduction of micro organisms and reduces the risk of resistance build up by micro organisms.

### REDUCING COSTS

- Reliable detection and removal of organic deposits, also in applications where cleaning flow rates are low (e. g. heat exchangers, injectors, faceplates).
- Expensive inspections and maintenance work belong to the past!
- Optimising the used quantities of chemicals and the demand of rinsing water.

### TM SMART CIP does not corrode stainless steel (1.4301) or steel.

Very good compliance for the dynamic and static application on sealings made from EPDM, FKM, HNBR and VNQ (See analysis carried out by FREUDENBERG Process Seals GmbH & Co.KG, D-68519 Viernheim).

Aluminium and sealing made from natural rubber are not compatible.

PACKAGING AND SHELF-LIFE	35kg canister, 250kg barrel Shelf-Life: 19 month from date of production
STORAGE	Store in cool, dark environment
SEWAGE AND DISPOSAL	The used TM SMART CIP application solution (1-2% concentration) can be drained off together with the rinsing water into the sewage (pH-value is lowered to 8.0 – 9.5 during cleaning). Concentrate may NOT be disposed of in regular sewage!
CAUTION!	Do not mix with other detergents! Rinse with water after use.
HAZARDOUS MARKING	Concentrate: C corrosive. For more information, please see the safety leaflet (MSDS).

**USE BIOCIDES SAFELY. ALWAYS READ LABEL AND CONSULT MSDS BEFORE USE. FOR PROFESSIONAL USE ONLY.  
24/7 POISONING EMERGENCY HOTLINE +43 - 1 - 406 43 43**