

## LIQUID IN-CAN PRESERVATIVE FOR HOUSEHOLD PRODUCTS

- Combination of N-formal and Sodium Pyrithione
- For water-based household products
- Broad range of microbiocidal efficacy
- Especially suitable for highly-alkaline products
- Effective in pH-ranges up to 12
- Could be used as disinfectant agent

### Technical data

	EINECS-Name	INCI-Name
Actives	$\alpha,\alpha',\alpha''$ -trimethyl-1,3,5-triazine-1,3,5(2H,4H,6H)-triethanol pyridine-2-thiol-1-oxide, sodium salt	Tris (N-Hydroxypropyl) Hexahydrotriazine Sodium Pyrithione
Appearance	Yellow liquid	
Density (20 °C)	1.084 – 1.104 g/ml	
Viscosity (DIN 53 211)	Flow time approx. 90 sec (20 °C)	
Odour	Amine-like	
Refractive index (20 °C)	1.464 – 1.476	
Boiling point	> 100 °C	
Flashpoint (ISO 2719)	> 100 °C	

### Fields of application

	Recommended dosage		
Washing-up liquids	–	–	The optimum use level should be evaluated by means of a repeated challenge test (e. g. at S&M – Technical and Microbiological dept). <b>Use biocides safely. Always read the label and product information before use.</b>
Liquid detergents	–	–	
Liquid detergents, highly alkaline	0.5 – 1.3 g/kg	(0.05 – 0.13 %)	
Liquid laundry detergents	0.5 – 1.3 g/kg	(0.05 – 0.13%)	
Liquid laundry fabric softener	–	–	
Window cleaners	–	–	
Liquid scouring cleansers	–	–	
Pre-moistened wipes	–	–	
Wax emulsions	–	–	
Shoe polishes	–	–	
Disinfectant agent	Approx. 1.5 g/kg (0.15 %) (based on the final concentration in the diluted working solution)		

### Instructions on application

Solubility (20 °C)	Fully soluble in water and in most organic solvents
Recommended use at pH	8 – 12
Maximum use temperature	80 °C
Further instructions	If possible, to be incorporated at an early stage during production. pH, temperature and redox conditions are to be taken into consideration. Cleaning of equipment is possible by rinsing with water.

### Microbiological efficacy

The efficacy of the product has been tested against the following microorganisms according to DGHM (German Society for Hygiene and Microbiology) – MIC in % of the product.

Bacteria	MIC	Yeasts	MIC	Fungi	MIC
Alcaligenes faecalis	0.025	Candida albicans	0.010	Aspergillus niger	0.025
Brevibacterium ammoniagenes	0.025	Candida mogii	0.010	Aspergillus oryzae	0.100
Escherichia coli	0.010			Fusarien	0.010
Micrococcus luteus	0.010			Penicillium funiculosum	< 0.006
Proteus vulgaris	0.010			Penicillium expansum	< 0.006
Pseudomonas aeruginosa	0.025				
Pseudomonas putida	0.050				
Pseudomonas stutzeri	0.025				
Legionella pneumophila (prEN 13623)	0.1 in 24 h				

## Compatibility

Undiluted	Aqueous dilution (0.15 %)	Foaming
<b>Compatible with:</b> - plastics and sealants - metallic materials  Copper and brass may experience discolouration.	No significant difference to water	Non foaming (DIN 53 902 ; 0.15 %)

## Safety & Labelling

<b>R- and S-Phrases</b>	R 22, 36/38, 43, 52 S 24, 37
<b>Labelling</b>	Xn (Harmful)
For further hazard instructions and safety advice please refer to the actual material safety data sheet.	

## Environmental information

**Grotan® WS Plus** contains only biodegradable components. Dilutions of **Grotan® WS Plus** do not normally interfere with the operation of waste water treatment plants. The canisters and drums used by Schülke & Mayr are made of polyethylene (HDPE) and are labelled accordingly. The 1000 kg containers are covered by a return scheme that ensures collection of the used containers free of charge and appropriate reuse all over Europe. The labels are made of PE. Schülke & Mayr packaging materials contain no PVC and can be recycled. Dispose of this material and its container at hazardous or special waste collection point. For further information please ask for our detailed environmental report.

## Listings and approvals of active ingredients

EINECS / ELINCS (Europe)
TSCA (USA)
DSL / NDSL (Canada)

## Shelf life/ Transport/ Storage

<b>Shelf life</b>	24 months
<b>Dangerous good</b>	No
<b>Package sizes</b>	10 kg, 200 kg, 1000 kg
<b>Storage</b>	Protect from frost, heat and direct sunlight. Store at room temperature in the original container.

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Our recommendations regarding our products are based on in-depth scientific testing in our Research Department, they are given in good faith, but no liability can be derived from them. In other respects our Conditions of Sale and Supply apply.

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