

# parmetol<sup>®</sup> DF 12

## Preservative for household products

- Suitable for preservation of water based household products
- Broad spectrum of efficacy
- Bactericidal and fungicidal effect

Active substance			
INCI name	EINECS-Name:	CAS-No.	EC-No.
Tetramethylolglycoluril	Tetrahydro-1,3,4,6-tetrakis(hydroxymethyl)imidazo[4,5-d]imidazole-2,5(1H,3H)-dione	5395-50-6	226-408-0
Octylisothiazolinone	2-Octyl-2H-isothiazol-3-one	26530-20-1	247-761-7
Methylchloroisothiazolinone	5-Chloro-2-methyl-2H-isothiazol-3-one	26172-55-4	247-500-7
Methylisothiazolinone	2-Methyl-2H-isothiazol-3-one	2682-20-4	220-239-6
(Mixture of 5-Chloro-2-methyl-2H-isothiazol-3-one and 2-Methyl-2H-isothiazol-3-one)		55965-84-9	

Physico-chemical properties	
Colour	nearly colourless - light yellow
Form	Liquid
Odour	characteristic
Density (20 °C)	1.035 - 1.047 g/ml
Refractive index (20 °C)	1.361 - 1.371
Initial boiling point	> 100 °C
Flash point (ISO 2719)	> 100 °C
Flow time (DIN 53211 - 20 °C)	< 20 s
Water solubility (20 °C)	emulsifiable
VOC-Content to Directive 2004/42/EC	11 %

Fields of application		
The optimum use level should be evaluated by means of a repeated challenge test (e.g. at schülke Technical and Microbiological department). Limits for labelling can be seen from the separate schülke labelling sheet.		
<b>Use biocides safely. Always read the label and product information before use.</b>		
	Recommended dosage	
Wet wipes	1 - 3 g/kg	(0.1 - 0.3 %)
Shoe polishes	1 - 3 g/kg	(0.1 - 0.3 %)
Other uses	Kindly contact us.	

Indications for use	
Solubility	Dilutable with water under formation of emulsion
Recommended use pH range	3 - 9.5
Maximum use temperature	max. 60 °C (depending on pH; recommended: max. 40 °C)
Additional advice	If possible, to be incorporated at an early stage during production. pH, temperature and redox conditions are to be taken into consideration. Avoid alkaline pre-solutions. 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). Determination of the minimum inhibitory concentration in the serial dilution test produced the following values (MIC in % of the product):					
Bacteria (gram-negative)	MIC	Bacteria (gram-positive)	MIC	Yeasts	MIC
<i>Corynebacterium ammoniagenes</i>	0.030	<i>Bacillus subtilis</i>	0.060	<i>Candida albicans</i>	0.015
<i>Enterococcus faecium</i>	0.250	<i>Staphylococcus aureus</i>	0.120	<i>Rhodotorula spp.</i>	0.015
<i>Escherichia coli</i>	0.120			<i>Saccharomyces cerevisiae</i>	0.060
<i>Klebsiella pneumoniae</i>	0.030			Moulds	MIC
<i>Micrococcus luteus</i>	0.060			<i>Alternaria spp.</i>	0.015
<i>Proteus mirabilis</i>	0.120			<i>Aspergillus niger</i>	0.030
<i>Pseudomonas aeruginosa</i>	0.120			<i>Penicillium expansum</i>	0.030
<i>Pseudomonas fluorescens</i>	0.120			<i>Penicillium funiculosum</i>	0.008
<i>Pseudomonas putida</i>	0.120			<i>Trichoderma virens</i>	0.030
<i>Pseudomonas stutzeri</i>	0.060				

# parmetol® DF 12

Compatibility*		
	compatible	to be avoided
concentrate	plastics, ethylene-propylene-terpolymer (EPDM), polytetrafluoroethylene (PTFE), high-alloyed stainless steel (e. g. 1.4571)	PVC (soft), sealants other than mentioned, metallic materials
aqueous dilution (0.2 %)	No significant difference to water	aluminium, unprotected steel

\*Compatibility has to be proved in each case

Labelling	
R-phrases(s)	R36/38, R43, R51/53
S-phrases(s)	S24, S35, S37
Labelling	Xi (Irritant), N (Dangerous for the environment)
	For further hazard instructions and safety advice please refer to the actual material safety data sheet.

**Environmental information**  
 parmetol® DF 12 contains only biodegradable components. Dilutions of parmetol® DF 12 do not normally interfere with the operation of waste water treatment plants. The canisters and drums used by schülke 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 packaging materials contain no PVC and can be recycled. For further information please ask for our detailed environmental report.

Listings and approvals of active ingredients
EINECS / ELINCS (Europe)
TSCA (USA)
ECL (Korea)
DSL / NDSL (Canada)
ENCS (Japan)
PICCS (Philippines)
AICS (Australia)
IECSC (China)

Transport & Storage	
Dangerous goods	Yes
UN-Number	3082
Packaging group	III
Package sizes	25 kg, 200 kg, 1000 kg
Shelf life	24 Months
Storage	Protect from frost, heat and direct sunlight. Store at room temperature in the original container.

Ecolabel			
	Basic criteria	Product type	max. use concentration
European Flower	2005/344/EC	Laundry detergents	0.30 %
European Flower	2005/344/EC	all-purpose cleaners and cleaners for sanitary facilities	0.30 %
European Flower	2005/342/EC	Hand dishwashing detergents	0.30 %

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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. It is the responsibility of the final product manufacturer to assure that claims made for the final product are in conformance with all applicable local laws. In other respect our Conditions of Sale and Supply apply.

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