

# parmetol<sup>®</sup> D 11

## Preservative for household products

- Water based benzisothiazolone (BIT) preparation
- Suitable for preservation of water based household products
- Broad, balanced spectrum of effect against bacteria, yeasts and moulds
- Especially suitable for application at elevated temperatures and high pH during production

Active substance	EINECS-Name:	CAS-No.	EC-No.
INCI name Benzisothiazolinone	1,2-Benzisothiazol-3(2H)-one	2634-33-5	220-120-9

Physico-chemical properties	
Colour	light yellow - yellow
Form	Liquid
Odour	characteristic
Density (20 °C)	1.055 - 1.075 g/ml
Refractive index (20 °C)	1.362 - 1.379
Initial boiling point	ca. 100 °C
Flash point (ISO 2719)	> 100 °C
Water solubility (20 °C)	in all proportions
VOC-Content to Directive 2004/42/EC	none
pH (concentrate)	ca. 13

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

	Recommended dosage	
Washing-up liquids	1.0 - 3.0 g/kg	(0.10 - 0.30 %)
Detergent	1.0 - 4.0 g/kg	(0.10 - 0.40 %)
Liquid detergents, highly alkaline	1.0 - 3.0 g/kg	(0.10 - 0.30 %)
Liquid laundry detergents	1.0 - 3.0 g/kg	(0.10 - 0.30 %)
Fabric softener	1.0 - 2.0 g/kg	(0.10 - 0.20 %)
Liquid scouring cleansers	1.0 - 4.0 g/kg	(0.10 - 0.40 %)
Window cleaners	1.0 - 3.0 g/kg	(0.10 - 0.30 %)
Wax emulsions	1.0 - 3.0 g/kg	(0.10 - 0.30 %)
Other uses	Kindly contact us.	

Indications for use	
Solubility	Fully soluble in water.
Recommended use pH range	3 - 11
Maximum use temperature	max. 100 °C
Additional advice	If possible, to be incorporated at an early stage during production. 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>Enterococcus faecium</i>	0.060	<i>Bacillus subtilis</i>	0.004	<i>Candida albicans</i>	0.060
<i>Escherichia coli</i>	0.030	<i>Staphylococcus aureus</i>	0.060	<i>Rhodotorula mucilaginosa</i>	0.015
<i>Klebsiella pneumoniae</i>	0.015			<i>Saccharomyces cerevisiae</i>	0.015
<i>Micrococcus luteus</i>	0.015			<b>Moulds</b>	<b>MIC</b>
<i>Proteus mirabilis</i>	0.030			<i>Alternaria alternata</i>	0.060
<i>Pseudomonas aeruginosa</i>	0.120			<i>Aspergillus niger</i>	0.120
<i>Pseudomonas fluorescens</i>	0.030			<i>Penicillium expansum</i>	0.250
<i>Pseudomonas putida</i>	0.060			<i>Penicillium funiculosum</i>	0.015
<i>Pseudomonas stutzeri</i>	0.008			<i>Trichoderma virens</i>	0.060

# parmetol<sup>®</sup> D 11

Compatibility*		
	compatible	to be avoided
concentrate	high-alloyed stainless steel (e. g. 1.4571), steel, ethylene-propylene-terpolymer (EPDM), nitrile rubber, fluorinated rubber, natural rubber, polyethylene, polyvinylchloride, polystyrene	copper, aluminium, brass, sealants and plastics other than mentioned
aqueous dilution (0.2 %)	No significant difference to water	Water incompatible materials, zinc

\*Compatibility has to be proved in each case

Labelling	
R-phrases(s)	R34, R43
S-phrases(s)	S26, S35, S37/39, S45
Labelling	C (Corrosive)
For further hazard instructions and safety advice please refer to the actual material safety data sheet.	

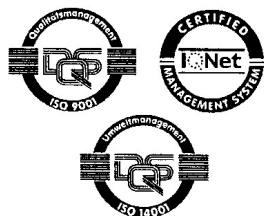
**Environmental information**  
 parmetol<sup>®</sup> D 11 contains only biodegradable components. Dilutions of parmetol<sup>®</sup> D 11 do not normally interfere with the operation of waste water treatment plants. The canisters and drums used by schülke are made of polyethylene (HDPE) and are labelled 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)
BfR XIV, XXXVI
FDA 175.105 / 176.300 / 176.170 / 176.180 / 177.2600

Transport & Storage	
Dangerous goods	Yes
UN-Number	1719
Packaging group	II
Package sizes	25 kg, 200 kg, 1000 kg
Shelf life	18 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	2003/200/EC	all-purpose cleaners and cleaners for sanitary facilities	0.30 %
European Flower	2005/342/EC	Hand dishwashing detergents	0.30 %
European Flower	2005/344/EC	Laundry detergents	0.40 %
Nordic Ecolabel	Nordic Swan	Cleaning agent	0.50 %

## schülke subsidiaries:



### Belgium

S.A. Schülke & Mayr  
 Belgium N.V.  
 1830 Machelen  
 Tel. +32-2-479 73 35  
 Fax +32-2-479 99 66

### China

Schülke & Mayr GmbH  
 Shanghai Representative Office  
 Shanghai 200041  
 Tel. +86-21-62 17 29 95  
 Fax +86-21-62 17 29 97

### France

Schülke France SARL  
 94250 Gentilly  
 Tel. +33-1-49 69 83 78  
 Fax +33-1-49 69 83 85

### Italy

Schülke & Mayr Italia S.r.l.  
 20148 Milano  
 Tel. +39-02-40 21 820  
 Fax +39-02-40 21 829

### Netherlands

Schülke & Mayr Benelux B.V.  
 2003 LM-Haarlem  
 Tel. +31-23-535 26 34  
 Fax +31-23-536 79 70

### Switzerland

Schülke & Mayr AG  
 8003 Zürich  
 Tel. +44-466 55 44  
 Fax +44-466 55 33

### United Kingdom

Schülke & Mayr UK Ltd.  
 Sheffield S9 1 AT  
 Tel. +44-1142-54 35 00  
 Fax +44-1142-54 35 01

### Other Distributors:

Argentina · Australia · Austria · Belarus · Benin · Brazil · Bulgaria · Canada · Croatia · Czech Republic · Denmark · Egypt · Estonia · Finland · Ghana · Greece · Hong Kong · Hungary · India · Indonesia · Iran · Israel · Japan · Jordan · Korea · Kuwait · Latvia · Lebanon · Lithuania · Macedonia · Malaysia · New Zealand · Nigeria · Norway · Oman · Philippines · Poland · Portugal · Russia · Saudi Arabia · Singapore · Slovakia · Slovenia · South-Africa · Spain · Sweden · Syria · Taiwan · Thailand · Turkey · Ukraine · United Arab Emirates · USA · Vietnam · Yemen

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.

**Schülke & Mayr GmbH**  
 22840 Norderstedt  
 Germany  
 Tel. +49 40 52100-0  
 Fax +49 40 52100-244  
[www.schuelke.com](http://www.schuelke.com)  
 sai@schuelke.com