

# parmetol® D 11

## Benzisothiazolone-formulation

- Water based benzisothiazolone (BIT) - preparation
- Suitable for preservation of a broad range of water based products
- Free of chloromethylisothiazolone, formaldehyde, formaldehyde depots and other aldehydes
- Free of VOC and phenols
- Especially suitable for application at elevated temperatures and high pH during production
- Approved for Ecolabel, e.g. "Blue Angel" or "European Flower"

### Active substance

EINECS-Name:	CAS-No.:	EC-No.:
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)	1.050 - 1.060 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 dept). 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	
Casein preparations	1.0 - 3.0 g/kg	(0.10 - 0.30 %)
Starch glues	1.0 - 2.0 g/kg	(0.10 - 0.20 %)
Bitumen emulsions	1.0 - 3.0 g/kg	(0.10 - 0.30 %)
Leather- and textile auxiliaries	1.0 - 3.0 g/kg	(0.10 - 0.30 %)
Glues, adhesives	1.0 - 5.0 g/kg	(0.10 - 0.50 %)

### 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				
<i>Proteus mirabilis</i>	0.030			<b>Moulds</b>	<b>MIC</b>
<i>Pseudomonas aeruginosa</i>	0.120			<i>Alternaria alternata</i>	0.060
<i>Pseudomonas fluorescens</i>	0.030			<i>Aspergillus niger</i>	0.120
<i>Pseudomonas putida</i>	0.060			<i>Penicillium expansum</i>	0.250
<i>Pseudomonas stutzeri</i>	0.008			<i>Penicillium funiculosum</i>	0.015
				<i>Trichoderma virens</i>	0.060

# parmetol® D 11

Compatibility*		
	compatible	to be avoided
concentrate	high-alloyed stainless steel (e. g. 1.4571), steel, ethylene-propylene-terpolymer, 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® D 11 contains only biodegradable components. Dilutions of Parmetol® 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 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
Blue Angel	RAL-UZ-102	low-emission wall paints	0.20 %
European Flower	2002/739/EC	indoor paints and varnishes	0.50 %

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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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