

# parmetol<sup>®</sup> DF 18

## Solvent based fungicide with algistatic properties

- Fungicidal and algistatic protection for various kinds of coatings
- Broad spectrum of efficacy
- Suitable for aqueous and solvent based products

### Active substance

EINECS-Name:	CAS-No.	EC-No.
Carbendazim	10605-21-7	234-232-0
2-Octyl-2H-isothiazol-3-one	26530-20-1	247-761-7
5-Chloro-2-methyl-2H-isothiazol-3-one	26172-55-4	247-500-7
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	yellow - brown
Form	Liquid
Odour	characteristic
Density (20 °C)	1.046 - 1.056 g/ml
Refractive index (20 °C)	1.456 - 1.467
Initial boiling point	ca. 180 °C
Flash point (ISO 2719)	> 100 °C
Flow time (DIN 53211 - 20 °C)	ca. 22 s
Water solubility (20 °C)	< 10 g/l
Foaming characteristics	Foaming possible
VOC-Content to Directive 2004/42/EC	81 %

### Fields of application

The recommended use levels relate to the total formulation in each case. The values given are recommended guidelines. Use levels > 0.62 % have to be labelled within the EC (29. ATP). Details can be seen from the separate schülke labelling sheet.

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

	Recommended dosage	
Dispersion paints	5 - 30 g/kg	(0.5 - 3.0 %)
Exterior coatings	10 - 40 g/kg	(1.0 - 4.0 %)
Textile coatings	10 - 20 g/kg	(1.0 - 2.0 %)
Printing lacquer	5 - 10 g/kg	(0.5 - 1.0 %)
Polar solvent based coatings	5 - 20 g/kg	(0.5 - 2.0 %)
Paper coatings	0.20 - 1.00 g/m <sup>2</sup>	

### Indications for use

Solubility	Highly soluble in polar organic solvents like alcohols, ethers, esters and ketones. Insoluble in aromatic and aliphatic hydrocarbons.
Recommended use pH range	3 - 10
Maximum use temperature	max. 180 °C (a few seconds on non-woven)
Additional advice	Dilutions of parmetol <sup>®</sup> DF 18 in water may separate. Thus, addition of the product should take place at a later stage during production. Cleaning of equipment is possible by rinsing with water.

### Microbiological efficacy

parmetol<sup>®</sup> DF 18 is especially suitable for the protection against algal and fungal attack for surface and facade coatings as well as for other building chemical products. The efficacy of parmetol<sup>®</sup> DF 18 was proven through extensive lab testings with common facade and plaster coatings on the market according to the methods SM 022/023 (analogous VdL RL 06/07) against the following germs:

*Alternaria alternata*, *Aspergillus niger*, *Penicillium funiculosum*, *Scenedesmus vacuolatus* (algistatic effect).

The optimum use level for the required efficacy can only be evaluated by means of suitable test methods with the finished product (e.g. in cooperation with the schülke technical and microbiological dept). parmetol<sup>®</sup> DF 18 does not provide an in-can preservation. For this we recommend the use of a suitable in-can preservative such as parmetol<sup>®</sup> A 26.

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Compatibility*		
	compatible	to be avoided
concentrate	plastics, sealants, stainless steel, aluminium	PVC (soft), brass, copper, zinc, steel
aqueous dilution (0.1 %)	No significant difference to water	Water incompatible materials, otherwise see advice for the undiluted product

\*Compatibility has to be proved in each case

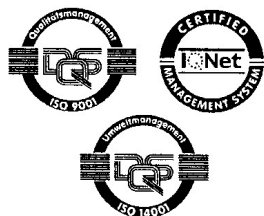
Labelling	
R-phrases(s)	R20/21, R34, R43, R46, R50/53, R60, R61
S-phrases(s)	S26, S35, S36/37/39, S45, S53, S60, S61
Labelling	T (Toxic), N (Dangerous for the environment)
For further hazard instructions and safety advice please refer to the actual material safety data sheet.	

**Environmental information**  
 Dilutions of parmetol<sup>®</sup> DF 18 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	1760
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.

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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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