

## Pall Stuttgarter Masse Ceramic Substrate

### Description

Pall Stuttgarter Masse substrate is a micro-porous ceramic product in the form of crushed grains consisting of more than 80 % of amorphous and crystalline silicic acids. Remaining amounts are mainly composed of alumina and small amounts of alkali and earth alkali oxides. The Stuttgarter Masse substrate is sintered at high temperatures to strong porous ceramic bodies.

The substrate has a high temperature and abrasion resistance. Stuttgarter Masse substrate is available in various grain sizes. Its colour is white.

Besides the high porosity, the ceramic substrate material has a large surface area that can be easily immobilized by microorganisms.

### Applications

Stuttgarter Masse substrate can be used for a broad range of applications in the field of chemical and biological process engineering. The outstanding characteristics of this product are achieved by a careful choice of raw materials, an adjusted pore size as well as the large surface area which stands for best possible results.

#### Bulk Material

- Fill for gravel bed filters for filtration and adsorption, e.g. for purification of water

#### Carrier Material

- Carrier material for catalysts and indicators e.g. gas detector devices

#### Substrate

- Substrate for the immobilisation of microorganisms in order to increase the biomass concentration
- e.g. biological purification of waste water and off-gases  
e.g. production of chemical substances, e.g. alcohol, acetic acid

Further applications possible.



Scanning Electron  
Micrograph



### General Information

Stuttgarter Masse substrate can be sterilized and thermally regenerated. This allows a residue free removal of microorganisms.

### Chemical Resistance<sup>1</sup>

Stuttgarter Masse substrate is chemically neutral and inert. It is resistant against acids, saline solutions and organic solvents, liquid or gaseous, even at elevated temperatures. Stuttgarter Masse substrate does not resist hydrofluoric acid. It is resistant up to pH 9 in the alkaline range.

<sup>1</sup> As end use conditions can vary it is the users responsibility to verify compatibility with their specific use conditions.

## Technical Information

Stuttgarter Masse (SM)	Unit	Data
Pore size of micropores	µm	0.1 – 1
Pore size of macropores	µm	1 – 100
Porosity	%	45
Material density	g/cm <sup>3</sup>	1.30
Bulk density	g/cm <sup>3</sup>	0.70
Max. temperature resistance	°C	500
Specific surface	m <sup>2</sup> /g	0.6

## Ordering Information

Part Number	Grain Size SM
88235100	0.4 – 0.8 mm
89451396	1.6 – 3.15 mm
88189700	3 - 5 mm
88143000	6 - 11 mm



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