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## Technical Datasheet

### PS-Photonox

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TiO<sub>2</sub>-photocatalyst  
degrades pollutants with UV radiation

#### 1. Applications

PS Photonox is optimised for photoactivity in UV radiation and can be used:

- ❖ to eliminate unwanted odours (e.g. automotive exhaust gases) and
- ❖ degrade dirt on surfaces (e.g. soot)
- ❖ for air purification (nitrogen oxides, sulphoxides, chlorinated hydrocarbons, and similar)
- ❖ for air deodorisation (exterior paints)
- ❖ in plastic films, window profiles, paints, concrete, etc. Gegen Formaldehyd/Acetaldehyd
- ❖ Against harmful gas pollution, as they originate from industrial arrangements and autotraffic, so primarily oxides of nitrogen
- ❖ Against fat-like soiling as for example stearate
- ❖ Against bacteria and mould mushroom spores as well as algae in the Inside and undeveloped outskirt area

#### 2. Properties

PS-Photonox

- ❖ is an ultra-fine TiO<sub>2</sub> with no pigmentary properties
- ❖ catalyses the degradation of organic and inorganic molecules when irradiated with UV and UVIS radiation
- ❖ is a white powder and has virtually no colouring properties in the quantities generally required
- ❖ is resistant towards air, moderate temperatures and pH values between 3 and 11
- ❖ suppresses the formation of NO<sub>2</sub> (more than 70 %) compared to conventional TiO<sub>2</sub>-catalysts

## Technisches Datenblatt

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#### 3. Typical product characteristics

TiO <sub>2</sub> -Content (ISO 591)	> 80 %
Crystal modification	Anatas
Density (ISO 787, Part 10)	3,9 g/cm <sup>3</sup>
Crystallite size	ca. 15 nm
Specific surface area (BET)	> 300 m <sup>2</sup> /g
Max. processing temperature	500 °C
Application pH-range	3 – 11
Typical photocatalytic activity (ISO 22197, Part 1)	
Degradation [mol/(h•m)] (2)	NO <sub>x</sub>
UV(A) radiation (2)	33,2
Visible light (3)	1,0

Methods of determination:

(1) internal standard method

(2) Irradiance = 10 W/m<sup>2</sup>

(3) Irradiance = 1700 lux; Part of UV(A) radiation < 11 mW/m<sup>2</sup>