

# Clean air. Clean surfaces.

photoment®

## Photocatalytically active additive for concrete goods

Photoment® is an innovative, photocatalytically active concrete additive. It consists of fine-grained, mainly glassy particles of oxides of silicon, aluminum and iron, and of titanium dioxide (TiO<sub>2</sub>), which is also known and widely used as a white pigment e.g. for paints and plastics. When exposed to light, the Photoment® surface causes a photocatalytic reaction to occur. In this reaction, noxious nitrogen oxides (NO<sub>x</sub>) are converted to harmless nitrates (NO<sub>3</sub><sup>-</sup>). A further advantage of the Photoment® products is their superhydrophilic surface. Rainwater and dew spread out over a large area of that surface and dislodge dirt particles and organic substances, which are then flushed off with the next precipitation. In other words, a product containing Photoment® cleans itself and therefore remains cleaner for longer.\*

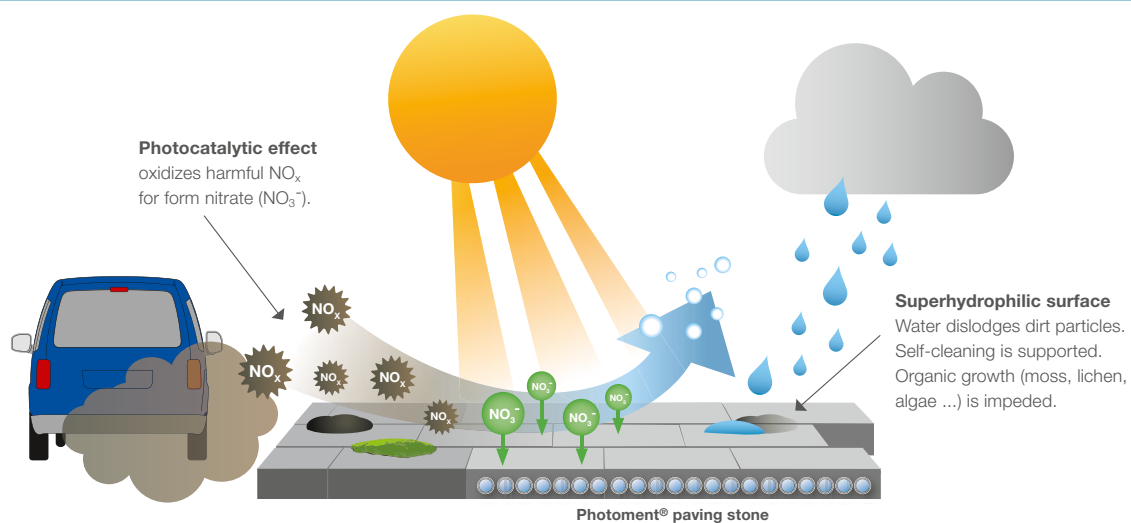
All the properties of products containing Photoment® are preserved for the entire life of the products. The photocatalyst in Photoment® is not consumed, and consequently the reaction can be repeated any number of times. The special grain structure and the pozzolanic characteristics of Photoment® have a favorable effect on the properties of the concrete. The workability and in particular the compactability of fresh concrete are improved. The requirements of the applicable standards with regard to compressive strength, indirect tensile strength, resistance to abrasion, resistance to frost and deicing salt and color stability are fulfilled when Photoment® is used. This has been demonstrated in combination with the most commonly used cement types.



## Typical product characteristics

Parameter	Unit	Value
Grain gross density	g/cm <sup>3</sup>	2.540
Bulk density (loose)	kg/dm <sup>3</sup>	0.750
Fineness > 0,045 mm	M.-%	< 40
d50 (laser granulometry)	µm	3.0–4.0
Specific surface area (BET)	m <sup>2</sup> /g	< 60
Water demand**	M.-%	35–40
Color	L*	70–80
	a*	-2.0–2.0
	b*	5–15
TiO <sub>2</sub> Crystal modification		Anatas

\*\* To standard stiffness as per DIN EN 196-3



\* The self-cleaning effect is decisively dependent on compliance with the instructions for manufacturing and laying (can be found on [www.photoment.com/mediathek](http://www.photoment.com/mediathek)).

Photoment® is a product brought to you by  
**STEAG Power Minerals GmbH**  
Duisburger Str. 170  
D-46535 Dinslaken  
Tel. +49 2064 608-366  
info@photoment.com  
www.photoment.com

in cooperation with  
**KRONOS INTERNATIONAL, Inc.**  
Peschstraße 5  
D-51373 Leverkusen  
Tel. +49 214 356-2472  
innovations@kronosww.com  
www.kronosww.com



**steag**  
POWER MINERALS