

# SIPERNAT® PC Hydrated Silica

EXFOLIATING PARTICLES FOR RINSE OFF FORMULATIONS

SIPERNAT® 



## SIPERNAT® PC product overview<sup>1</sup>

	Particle size <sup>2</sup> (d <sub>50</sub> , µm)	pH (5% in water)	Preferred application (examples)
<b>SIPERNAT® 22 PC</b>	100–140	5.5–7.5	Sensitive skin formulations Face wash
<b>SIPERNAT® 250 PC</b>	180–480	6.0–7.5	General scrub formulations Body wash
<b>SIPERNAT® 2200 PC</b>	260–380	5.0–7.0	Sensitive skin formulations Body wash
<b>SIPERNAT® 9000 PC</b>	550–850	6.0–7.5	Strong particle sensation Foot scrubs / Heavy dirt hand wash

<sup>1</sup> Typical data for technical evaluation—values do not represent a specification.

<sup>2</sup> Measured by laser diffraction following ISO 13320.

## Properties

Appearance	White powder
Odor	Odorless
pH	5.0–7.5
CAS Registry No.	112926-00-8 (ex 7631-86-9)

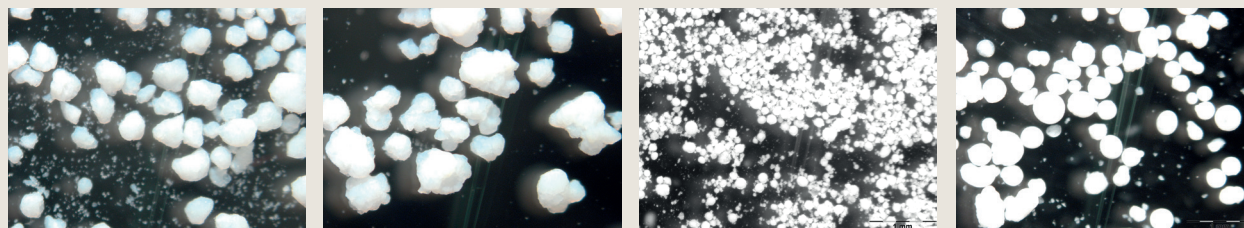
## Regulatory information

INCI name	Hydrated Silica
COSMOS	Registered
ISO 16128-1	Derived mineral ingredient
Natrue	Approved (Nature identical inorganic pigment or mineral)

SIPERNAT® PC Hydrated Silica exfoliating particles are tailored to cover the full range of scrub formulations, enabling different desquamation and sensory properties. The SIPERNAT® PC portfolio offers particles in different size, morphology and hardness that enable formulations for skin areas of different sensitivity (e.g. face, body, feet). The synthetic mineral nature of SIPERNAT® PC Hydrated Silica provides for consistent and high quality, reducing the microbiological burden in the formulations to a minimum. The hydrophilic surface of the SIPERNAT® PC Hydrated Silica particles not only makes them easy to incorporate into any type of scrub formulations but also ensures removal in waste water treatment after application. This makes SIPERNAT® PC an eco-friendly alternative for microplastic.

SIPERNAT® PC Hydrated Silica due to its close relation to natural occurring silica is recognized as nature identical by major certification organizations, e.g. COSMOS.

**Figure 1** Microscope pictures of SIPERNAT® PC Hydrated Silica particles



SIPERNAT® 250 PC

SIPERNAT® 9000 PC

SIPERNAT® 22 PC

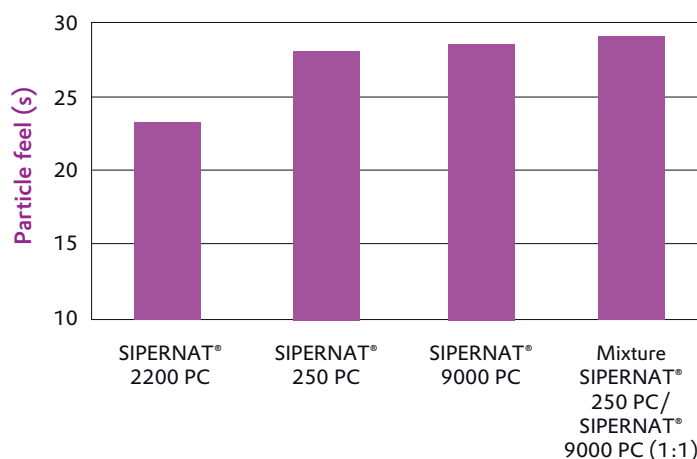
SIPERNAT® 2200 PC

SIPERNAT® 250 PC and SIPERNAT® 9000 PC are composed of exceptionally sturdy round-edged Hydrated Silica particles and are therefore the preferred choice for formulations with a long lasting scrubbing effect. The large SIPERNAT® 9000 PC particles are selected for strong desquamation or for the function of a sensory indicator when combined with smaller particles for the cleaning.

SIPERNAT® 22 PC and SIPERNAT® 2200 PC both feature spherical and softer particles, providing for a gentle cleaning. With its small and soft particles, SIPERNAT® 22 PC is specially recommended for its efficient but gentle desquamation. SIPERNAT® 2200 PC with the bigger particles leads to a more pronounced particle sensation in the formulations. As its particles disintegrate while rubbing on skin the product is a preferred choice when gentle cleansing is desired, e. g. for sensitive formulations.

#### Processing of SIPERNAT® PC Hydrated Silica

- Incorporate SIPERNAT® PC Hydrated Silica at low to moderate shear to prevent the destruction of the particles at any time during processing.
- Typical use concentration is 5 to 10 w.-%. Please note that for the same number of particles higher concentrations of SIPERNAT® PC products with bigger particle size are needed.



**Figure 2** Durability of SIPERNAT® PC particles dispersed in an aqueous scrub formulation on rubbing to the skin

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