

SIPERNAT® 45 and SIPERNAT® 45 S

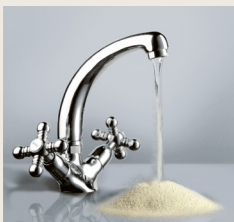
High Absorption Capacity Problem Solvers for Industrial and Defoamers



Inside, to get it right – Evonik provides solutions to improve the flow behavior and storage stability of powders with specialty engineered anti-caking, free-flow agents, and carriers. Through advanced controlled structure technology and custom application development, **SIPERNAT® 45** and **SIPERNAT® 45 S** can efficiently provide the optimal application solution.

SIPERNAT® 45

This precipitated silicon dioxide is an extremely absorptive, medium particle size carrier that converts liquids into free-flowing powders for easy processing and handling. SIPERNAT® 45 is specifically engineered to be used when you need the highest level of carrying capacity, forming dry liquid concentrates up to 75 %!



Liquids that SIPERNAT® 45 can convert to highly concentrated absorbates:

- Plasticizer
- Lubricants
- Blowing agents
- Peroxides
- Antistatic agents
- Silicone oil
- Methacrylates
- Melamine resin

Maximum Absorption Capacity of ZEOFREE® and SIPERNAT® products/wt%

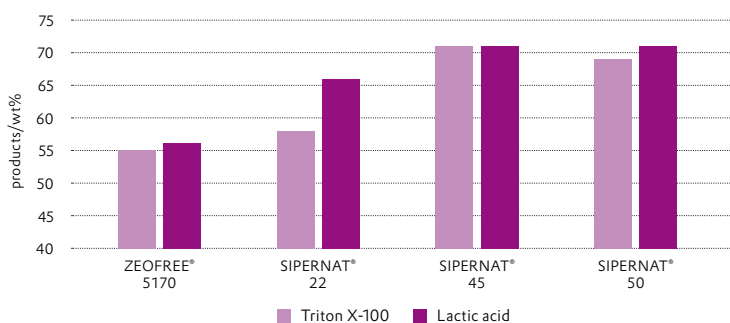
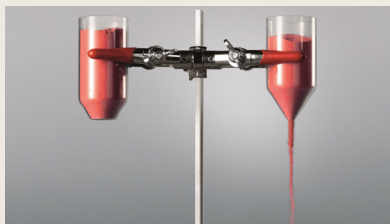


Figure 1
SIPERNAT® 45, despite being lower in surface area, serves as a highly absorptive, specialty carrier for liquids. In the example above, it exceeded a loading of 70% liquid, while maintaining free flow and easy handling properties.

SIPERNAT® 45 S

This precipitated silicon dioxide is a high-performance anti-caking agent and free flow aid. With its combination of high absorption capacity and small particle size, SIPERNAT® 45 S protects hygroscopic ingredients, prolonging shelf life and improving powder rheology.

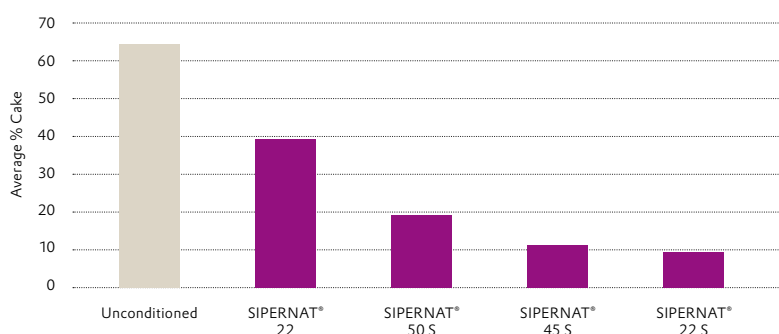


Products which may benefit from SIPERNAT® 45 S:

- Leveling agents
- CPE (Chlorinated polyethylene)
- PVC stabilizers
- Rubber recycling powder
- Permanganate
- Sodium bicarbonate
- Technical salts

Anticaking Impact of SIPERNAT® 45 S on Hygroscopic Formulations

Moisture and Pressure (2% Silica)



*Example:
Calcium Hydrogen
Phosphate*

Figure 2
SIPERNAT® 45 S is extremely effective at reducing caking. In the example above, at 2% dosage SIPERNAT® 45 S reduced caking by over 80% in Calcium Hydrogen Phosphate powder.

PRODUCT	DOA ABSORPTION (ml/100g)	PARTICLE SIZE (µm)	pH	SPECIFIC SURFACE AREA (m ² /g)	TAMPED DENSITY (g/L)	REGIONAL AVAILABILITY
SIPERNAT® 45	285	25	7.5	265	150	Americas
SIPERNAT® 45 S	275	18	7.5	260	90	Americas

The given data are typical values. Specifications are available on request. Evonik strives for quality, consistency and reliability.

Evonik precipitated silica and silicates comply with various global regulatory requirements, i.e. FDA 21 CFR 172.480, 173.340,160.105, and the FCC Silicon Dioxide monograph. Please contact Evonik for specific information regarding regulatory approvals.

This information and any recommendations, technical or otherwise, are presented in good faith and believed to be correct as of the date prepared. Recipients of this information and recommendations must make their own determination as to its suitability for their purposes. In no event shall Evonik assume liability for damages or losses of any kind or nature that result from the use of or reliance upon this information and recommendations. EVONIK EXPRESSLY DISCLAIMS ANY REPRESENTATIONS AND WARRANTIES OF ANY KIND, WHETHER EXPRESS OR IMPLIED, AS TO THE ACCURACY, COMPLETENESS, NON-INFRINGEMENT, MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE (EVEN IF EVONIK IS AWARE OF SUCH PURPOSE) WITH RESPECT TO ANY INFORMATION AND RECOMMENDATIONS PROVIDED. Reference to any trade names used by other companies is neither a recommendation nor an endorsement of the corresponding product, and does not imply that similar products could not be used. Evonik reserves the right to make any changes to the information and/or recommendations at any time, without prior or subsequent notice. SIPERNAT® and ZEOFFREE® are registered trademarks of Evonik Industries or its subsidiaries.

Evonik Operations GmbH
Silica business line
Rodenbacher Chaussee 4
63457 Hanau
Germany

Phone +49 6181 59-12532
Fax +49 6181 59-712532
ask-si@evonik.com
www.silica-specialist.com

The Silica specialists at Evonik – Inside, to get it right.

