



## **nanogel**<sup>TM</sup> FINE PARTICLE AEROGEL

### Product Features

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Particle Size Range: 5 to 15  $\mu\text{m}$  (0.0002 to 0.0006 in)  
5 to 500  $\mu\text{m}$  (0.0002 to 0.0197 in)  
5 to 1200  $\mu\text{m}$  (0.0002 to 0.0472 in)

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Pore Diameter:  $\approx 20 \text{ nm}$

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Bulk Density: 40 to 100  $\text{kg/m}^3$  (2.5 – 6.2  $\text{lb/ft}^3$ )

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Surface Chemistry: Fully Hydrophobic

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Thermal Conductivity: 0.018  $\text{W/m}\cdot\text{K}$  at 25°C  
(0.125  $\text{Btu}\cdot\text{in/hr}\cdot\text{ft}^2\cdot^\circ\text{F}$ )

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Surface Area: 600 to 800  $\text{m}^2/\text{g}$

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CAS RN: 126877-03-0

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### Nanogel® Fine Particle Aerogel Information

The Nanogel® Fine Particle Aerogels are white, free flowing powders. A wide range of particle sizes and size distributions can be produced. The unique properties and characteristics of aerogel products can provide performance advantages in a variety of applications:

- Reinforcement
- Rheological control
- Thermal insulation
- Acoustic insulation
- Free Flow
- Anti-caking
- Water repellency
- Fluidization
- Corrosion resistance
- Matting
- Anti-foaming

### Nanogel® Aerogel Flammability Testing

Flammability of solids – burning rate (fire train test)  
(Chilworth Technologies)

Result: not readily combustible substance of Division 4.1  
(DOT); No smoke

Standard Test Method for Ignition Properties of Plastics –  
Test Method: ASTM D-1929 (Vtech)

Flash Ignition Temp	Self Ignition Temp
395°C (750°F)	395°C (750°F)

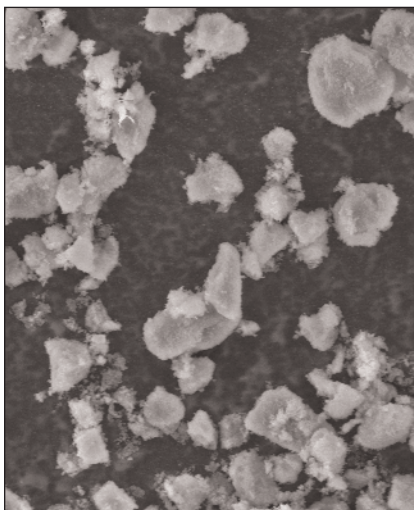
## The Benefits of Utilizing Nanogel® Fine Particle Aerogels

These Nanogel® Fine Particle Aerogels represent a new class of hydrophobic silica particles distinguished by its:

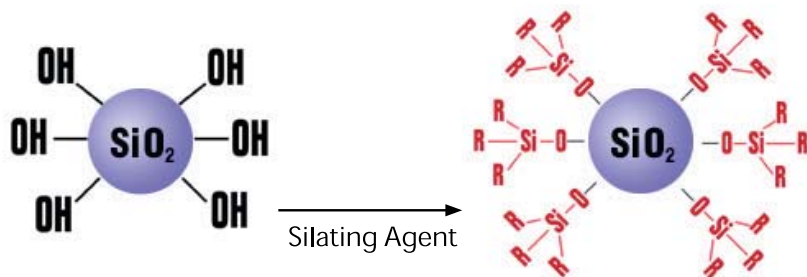
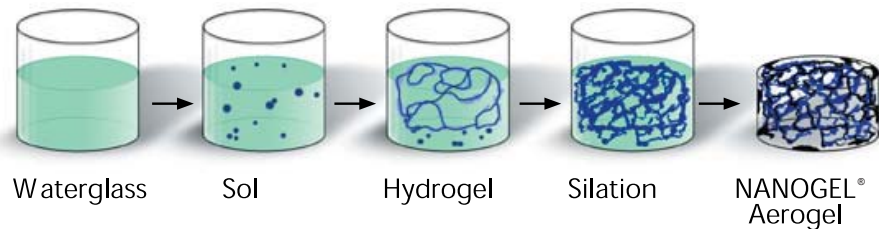
- porosity
- hydrophobicity
- level of extractable materials
- range of particle sizes
- transparency

Unique combinations of these characteristics create opportunities to improve performance in a variety of fine particle applications.

### State-of-the-Art Nanogel® Aerogel Technology Direct Silation of the Hydrogel



Micronized Aerogel



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#### North America

Cabot Corporation  
700 E. U.S. Highway 36  
Tuscola, IL 61953-9643  
U.S.A.  
T: (217) 253-3370  
F: (217) 253-4334

#### Europe

Cabot Rheinfelden  
GmbH and Co. KG  
Kronenstrasse 2  
79618 Rheinfelden  
Germany  
T: (49) 7623-707-0  
F: (49) 7623-707-53

#### Asia Pacific

Cabot Specialty Chemicals Inc.  
Level 21, MNI Tower 2  
11, Jalan Pinang  
50450 Kuala Lumpur,  
Malaysia  
T: (60-3) 2164-8352  
F: (60-3) 2162-0253

#### South America

Cabot Corporation Latin  
American Division  
Av. João, Castaldi, 88  
04517-900, São Paulo, SP,  
Brazil  
T: (55-11) 5091-8300  
F: (55-11) 5542-6037

E-mail: [nanogel@cabot-corp.com](mailto:nanogel@cabot-corp.com)