



# nanogel<sup>TM</sup> TRANSLUCENT AEROGEL

## Product Features

Particle Size Range:	≈ 0.5 to 4.0 mm (0.02 to 0.16 in)
Pore Diameter:	≈ 20 nm
Porosity:	> 90%
Bulk Density:	90 to 100 kg/m <sup>3</sup> (5.6 – 6.2 lb/ft <sup>3</sup> )
Surface Chemistry:	Fully Hydrophobic
Thermal Conductivity:	0.018 W/m·K at 25°C (0.125 Btu-in/hr·ft <sup>2</sup> ·°F)
Surface Area:	600 to 800 m <sup>2</sup> /g
CAS RN:	102262-30-6

## Nanogel<sup>®</sup> 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)

Minimum Ignition Energy of Dust:  
US Bureau of Mines Report of Investigations 5624

Temperature	Minimum Ignition Energy
RT	>500 mJ

Caloric Content (ASTM E1354-02):

3.37 MJ/kg	1451 Btu/lb
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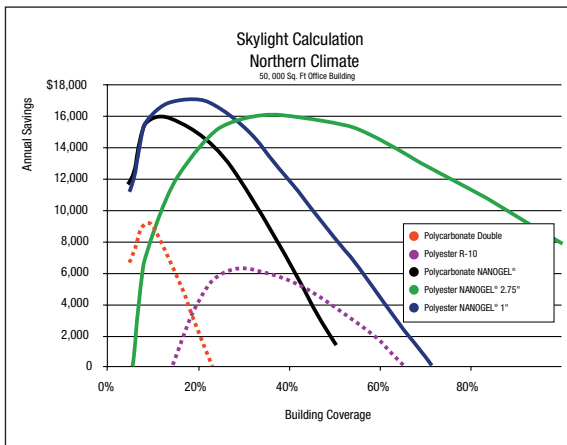
Smoke Density (E662): D<sub>s</sub>=0.3

## Nanogel<sup>®</sup> Translucent Aerogel Properties

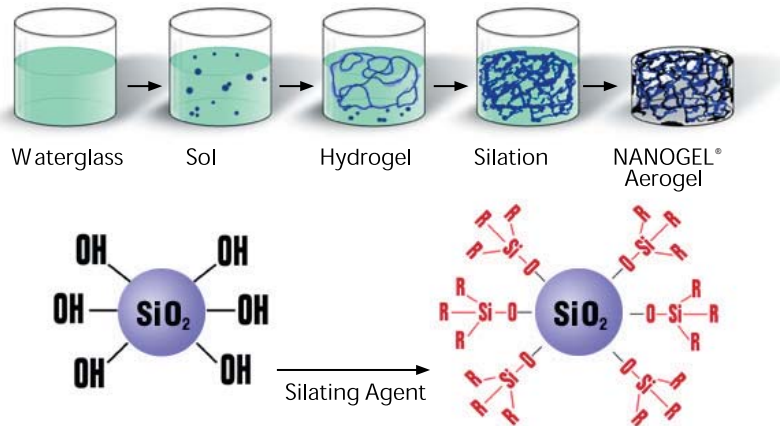
Aerogel Thickness		Light Transmission	Solar Heat Gain Coefficient / g factor	U (Btu/hr·ft <sup>2</sup> ·F)	K (W/m <sup>2</sup> ·K)
0.5"	1.3 cm	73%	0.73	0.25	1.4
1"	2.5 cm	53%	0.52	0.125	0.7
1.25"	3.1 cm	45%	0.43	0.1	0.57
1.5"	3.8 cm	39%	0.39	0.083	0.47
2"	5 cm	28%	0.26	0.063	0.35
2.5"	6.4 cm	21%	0.21	0.05	0.28

## The Benefits of Utilizing Nanogel® Translucent Aerogel

- Introduces the best insulation, diffuse light-transmitting technology on the globe.
- Doubles light transmission and thermal insulation over current technologies.
- Ability to meet stringent building codes for thermal insulation and light transmission without trade-offs.
- Improved insulation performance, reduced energy consumption and HVAC costs.
- Better system performance, leads to better daylighting designs, leads to better lives.



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



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#### North America

Cabot Corporation  
157 Concord Road  
Billerica, MA 01821  
U.S.A.  
T: (978) 670-7077  
F: (978) 670-7045

#### 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

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



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