

# Translucent DAYLIGHTING by DUO-GARD

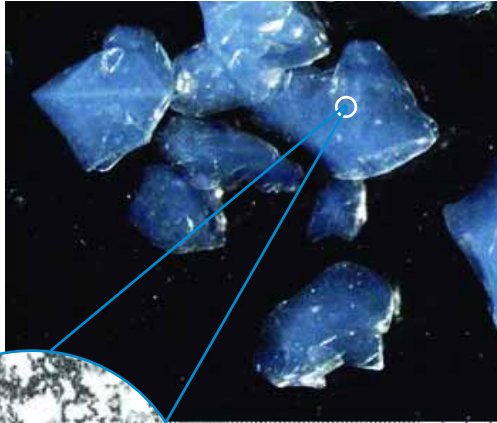
Architectural Systems Integrating  
Nanogel<sup>®</sup> Translucent Aerogel

The industry's most diverse design/build systems  
and solutions in high-performance translucent polycarbonate  
technology for today's green building environment.

[www.duo-gard.com](http://www.duo-gard.com)



## The Only Eco-Insulation for High-Performance Daylighting



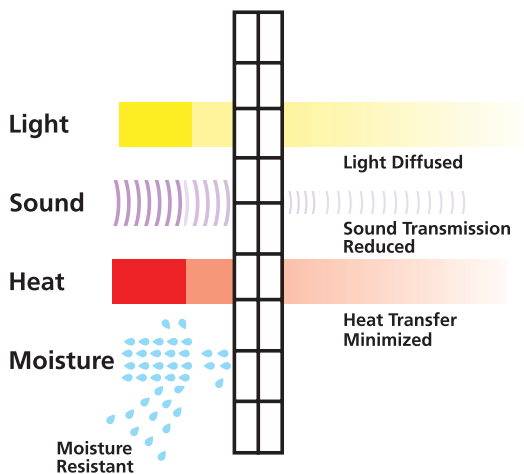
- ~ 20nm pore size
- UV Stable
- 97% Air

### WHAT IS NANOGEL® AEROGEL?

Nanogel® is Cabot Corporation's trade name for its family of hydrophobic silica aerogel products. Translucent aerogel particles allow light to pass while serving as a highly effective thermal insulation. Nanogel is a unique material. Some products may perform similarly in ONE area of performance, but Nanogel has ALL of the following characteristics:

- Excellent thermal insulation
- Transmits high-quality diffuse light
- Reduces sound transmission
- Completely moisture resistant
- Resists growth of mold, mildew, and fungus
- Performance will not deteriorate over time

### DUO-GARD POLYCARBONATE SYSTEMS FILLED WITH NANOGEL®



#### Thermal Insulation

Nanogel aerogel's porous structure significantly reduces the conduction and convection of heat, making it an excellent thermal insulator.

#### Light Transmission

Light is diffused through Nanogel aerogel's translucent, porous structure, allowing an even dispersion of light.

#### Acoustic Insulation

Nanogel aerogel's porous structure slows down the speed of sound, reducing sound transmission.

#### Performance

Nanogel aerogel's surface treatment prevents color change, resists mold and mildew, and will have no performance degradation

#### CREDITS:

Omniflora Lounge Wall • Alexandria VA • Ritter Architects (Courtesy photo)  
 ITP Rapid Central Station Platform • Grand Rapids MI • Architect: Progressive AE. Gen'l Contractor: The Christman Co. • Photography by Chuck Heiney  
 Camp Daggett • Petoskey MI • Richard Neumann Architect • Photography by John R. Wooden  
 Coleman A. Young Recreation Center • Detroit • Merz & Associates, Architects and Urban Designers • Photograph by Ken Ladina, Direction Graphics



**Meditation Room - Crawford-Smith House**  
Extreme Makeover: Home Edition 2/12/06



*With leadership in translucent daylighting, canopies, interior walls and site shelters, Duo-Gard serves the architects, designers and contractors who build and renovate in today's dynamic environment of green building.*

## WHY CHOOSE DUO-GARD WITH NANOGEL?

Duo-Gard daylighting systems in combination with Nanogel aerogel bring a wide range of benefits to architectural applications, including:

- Improved thermal and acoustic insulation of the building structure
- Energy-efficiency and security with a thickness of 8mm to 40mm to cover a wide range of structural requirements
- Sound dampening qualities to create quieter indoor environments
- Superior architectural detail when viewed from the exterior or interior
- Transmission of diffused light to building interiors, eliminating glare and shadows, while increasing comfort and productivity for occupants
- Custom design/build flexibility for unusual applications including dramatic illuminations

Polycarbonate	Light Transmission		Shading Coefficient		U-Value	
	EMPTY	WITH NANOGEL	EMPTY	WITH NANOGEL	EMPTY	WITH NANOGEL
8 mm	81%	66%	0.94	0.77	0.58	0.39
10 mm	82%	64%	0.94	0.73	0.55	0.33
16 mm	74%	50%	0.86	0.58	0.42	0.23
20 mm	75%	46%	0.88	0.53	0.33	0.19
25 mm	69%	37%	0.61	0.32	0.26	0.16
40 mm	69%	25%	0.66	0.26	0.19	0.10

U-values are those published by the glazing extruders.

Coleman A. Young Rec. Center



Omnifics Lounge Wall



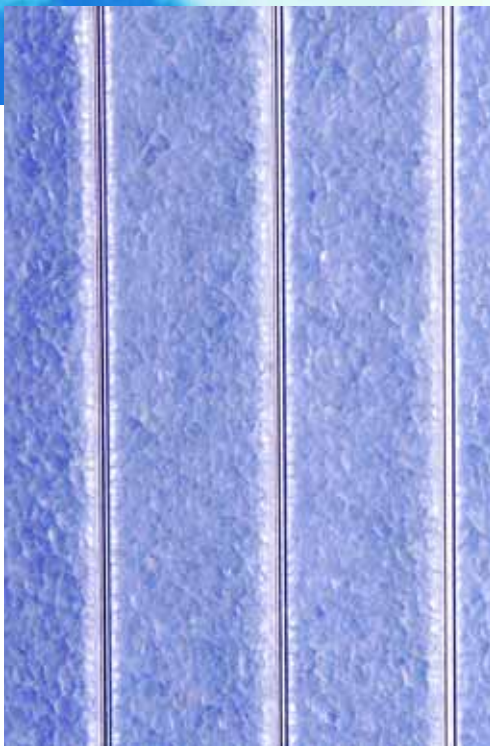
CONTACT US FOR MORE INFORMATION AT:

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Camp Daggett





### BENEFITS OF NANO GEL TRANSLUCENT AEROGEL

- Superior insulation and diffuse light-transmitting technology.
- 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, leading to better daylighting designs.

### NANO GEL IN DAYLIGHTING SYSTEMS

Increasing natural daylighting in building has long been a goal in architectural design. Studies have shown that people thrive in natural lighting: they're healthier, happier and more productive.



### Duo-Gard's translucent systems may contribute to your "green design" gaining LEED® points for your building/project

- Superior insulation and diffuse light transmitting technology.
- Improved insulation performance, reduced energy consumption and HVAC costs.
- Ability to meet stringent building codes for thermal insulation and light transmission without trade-offs.
- Environmentally friendly.
- Reduces sound transmission.
- Moisture resistant.
- Performance will not deteriorate over time.
- Thermal insulation will not degrade over time.
- 10 year manufacturer's warranty.
- Resistant to mold, mildew and fungus.

### *We specialize in advanced translucent polycarbonate technology second to none!*

- High-quality diffused light
- High energy efficiency
- Architectural aesthetics
- Unlimited design versatility
- Unmatched polycarbonate expertise
- Sustainable performance



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