

# The SmartGel Seminar

## Who Should Attend

You'll benefit from *The SmartGel Seminar* if you are an engineer, engineering manager, or quality professional responsible for encapsulating high-brightness LEDs or designing flat panel displays.

## What You'll Learn

*The SmartGel Seminar* is a two-hour seminar about the technology and chemistry of index-matching, light-transmitting materials designed and manufactured by Nye Lubricants, Inc. You'll learn why SmartGels increase lumen output and improve the durability of photonic devices, how they're made, and how they can be custom-formulated specifically for your product!

## What You Get When You Attend

**Seminar Handbook**, a SmartGel reference booklet when you return to work.

**Engineer's Reference Card** for indices of refraction for engineered plastics and glass.

**SmartGel Tutorial**, a booklet of frequently asked questions about SmartGel.

**Ask about a SmartGel Seminar for your engineers.**

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## Seminar Outline

### SmartGel® Overview

- SmartGels® vs. Epoxies
- Why Use SmartGels®?
- How SmartGel® Reduces Reflection
- SmartGel® and LEDs
- SmartGel® Encapsulation
- Light Transmission and SmartGel®
- SmartGel® Specifications
- SmartGel® and Index of Refraction
- Calculating Optimal SmartGel® Index of Refraction for Different Materials
- How Refractive Index is Affected by Temperature and Wavelength
- SmartGel® Viscosity
- SmartGel® Hardness
- Clarity of Optical SmartGels®
- Specifying SmartGel®

### SmartGel® Chemistry

- Poly(dimethylsiloxane)
- Methylphenylsilicones
- Fluorosilicones
- SmartGel® Additives
  - Thixotropic SmartGels®
  - Two-Part Curing SmartGels®
- Characterization of Two-Part Curing SmartGels®
  - Hardness
  - Refractive index
  - Clarity
  - Pot life
  - Cure Rate
- Cure Rate Monitoring
- How is SmartGel® Pot Life Controlled?
- Inhibitor Content vs. Pot Life
- Pot Life and Temperature
- Viscosity and Cure Rate

### SmartGel® Manufacturing

- SmartGel® Inspection and Testing
- SmartGel® Packaging
- Commercial SmartGel® Products

### SmartGel® Applications

### Next Generation SmartGel®

Presented by



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