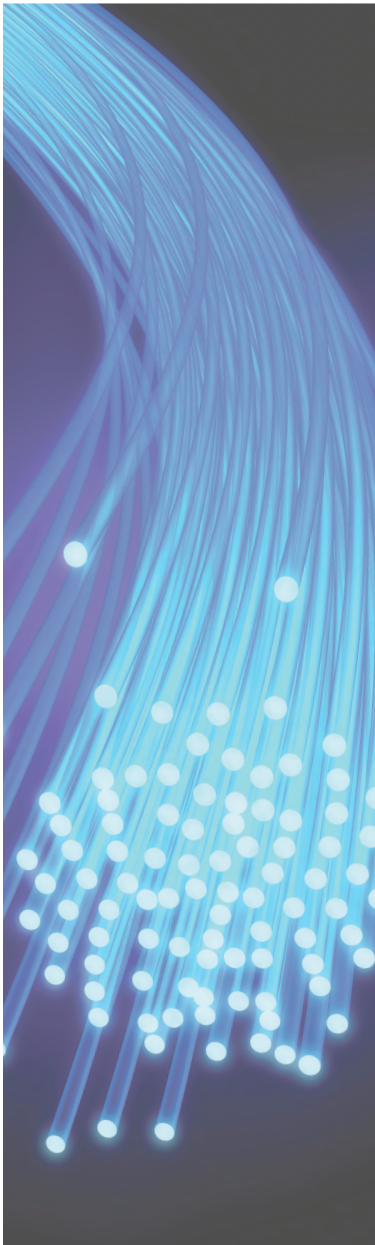




Lubeneotes:

Design Engineer's Guide to Selecting a Lubricant

SmartGel® Optical Products



Nye has been on the forefront of optical design for more than 30 years. From optical fiber connections to high brightness LEDs, SmartGel® technology has enabled our customers to improve the performance, reliability and operating life of photonic products.

Manufacturing of Nye optical products follows a tightly controlled proprietary process. SmartGel® raw materials undergo rigorous pre-production conditioning to improve the optical clarity and stability of the base polymers. Formulated gels and fluids are also ultrafiltered to ensure the highest standards of light transmission. As a result, Smartgels withstand wide temperature excursions (-65°C to 200°C), are non-yellowing under typical conditions and unaffected by x-ray, ultraviolet or sunlight exposure.

Nye offers three types of optical materials; fluids, thixotropic gels (non-curing) and curing gels.

Optical coupling fluids are ready to use materials for applications where free flow is advantageous. Colorless, odorless, non-toxic and the stable chemistry of the optical fluids promote a long service life.

Thixotropic gels are ready to use materials that will not migrate. This non-hardening gel allows for devices to be easily mated or disconnected.

Curing gels are a two component system that must be mixed (50:50) to form a viscoelastic solid. Curing gels will flow into tight spaces to cure in place or can be premolded and cured into shapes.

Index matched and formulated to your photonic device. In addition to matching the refractive index of your optical materials, Nye can adjust fluid and gel properties such as viscosity, hardness, set time and adhesion to optimize the performance of your device.

For technical specifications, evaluation samples, or questions about any Nye products — or to discuss a lubricant custom-designed for your application — call +1.508.996.6721 or email us at contact@nyelubricants.com. Nye is ready to work with you to ensure you make the best possible SmartGel choice.

Contact Nye at +1.508.996.6721
or contact@nyelubricants.com

Innovative Solutions since 1844 

Non-Curing Gels	Refractive Index at 25°C (589 nm)	Oil Separation (24 hrs at 100°C)	Evaporation (24 hrs at 100°C)	Description / Uses
OC431A-LVP	1.46	0.2%	<0.2%	Fiber optic splices
OC431A-LVS	1.46	4%	<0.2%	Soft version of OC431A-LVP
OC-440A	1.51	4%	<0.2%	Matching high index plastic
OC-462	1.61	3%	<0.1%	Laser applications near IR

Curing Gels	Refractive Index at 25°C (589 nm)	Pot Life *	Shore Hardness 00 *	Description / Uses
OCK-441	1.40	8 hours	35	UV applications
OCK-433C-10	1.46	4 hours	10	No adhesion
OCK-433	1.46	Fast cure	40	Cures at room temperature
OCK-451LP	1.51	2 hours	40	LED encapsulant
OCK-451LPC	1.51	2 hours	40	Good adhesion
OCK-451LPH	1.51	4 hours	40	Good tensile strength. Flat panel displays.

* Adjustable properties

Optical Fluids	Refractive Index at 25°C (589 nm)	Viscosity at 25°C	% on Transmission at 400nm	Description / Uses
OCF-446	1.46	1,500 cs	>95%	Base oil for OC-431A-LVP
OCF-446H	1.46	30,000 cs	>95%	High viscosity fluid encapsulant
OCF-452	1.51	600 cs	>95%	Base oil for OCK-451LP
OCF-452H	1.51	30,000 cs	>95%	High viscosity fluid encapsulant
OCF-463	1.63	1,800 cs	85%	Base oil for OC-462