



ÅNGSTRÖM *Link*TM **AL-5263**

Optical Fluid

For photonics and optics applications

ÅNGSTRÖM *Link*TM KEY FEATURES

- High refractive index
- Optically clear
- Low volatility
- High purity
- Wide service temperature
- Chemically inert

ÅngströmLink AL-5263 is a chemically inert optical grade fluid designed especially for sensitive optical assemblies.

Applications

Wafer level optical metrology

Coolant/optical fluid for high power laser optics

Non-toxic high index microscope immersion fluid

Gap coupling between optical elements

Projection display components

Solar cell efficiency enhancer

Benefits

Allows index matching to high index plastics, glasses, semiconductors

Efficient optical transmission for wavelengths >400nm

Non-toxic, compatible with optical grade materials

Low ionics for sensitive semiconductors, metals

(revision 2/2011)

For more information on this or other products and their availability, please contact us at:
1-800-IS-FIBER (473-4237); (508) 992-6464; Fax us at (508) 991-8876, or via email at sales@focenter.com
Please visit us on the web at WWW.FOCENTER.COM

Property (at 25°C unless noted)	Test Method	Typical Value
Mechanical Properties		
Color, Appearance	Visual	Optically Clear
Kinematic Viscosity	ASTM D-445	1000 cP
Specific Gravity	ASTM D-1217	1.20
Microscopic Particulate Contamination	MIL-STD-1246C	Level 25 or better, particulates/100ml
Thermal Properties		
Thermal Coefficient of Expansion	ASTM D-1903	6×10^{-4} cc/cc/°C
Evaporation Rate (24hrs, 100°C)	ASTM D-972	<0.02%
Electro-optical Properties		
Refractive Index, 589 nm	ASTM D-1218	1.63
Refractive Index vs. Temperature, 589 nm	ASTM D-1218	$-3.1 \times 10^{-4}/^{\circ}\text{C}$
Refractive Index vs. Wavelength	prism coupler	(see chart)
Optical Absorption	spectrophotometer	(see chart)

Deaeration

If air bubbles become trapped in the dispensed fluid volume during the dispensing process, the assembly should self-deaerate due to the product's low viscosity as long as no pockets of air are trapped beneath mechanical parts. If accelerated deaeration is required, the assembly may be vacuum deaerated using a pressure of 635 mmHg (25 inHg) or greater. Apply the vacuum while observing fluid for presence of bubble formation and increase vacuum slowly enough to avoid rapid foaming. Hold vacuum until bubbles at the fluid surface collapse and are no longer visible.

Optical Material Compatibility

AL-5263 is inert and compatible with most optical plastics, glasses, crystals and semiconductors. As a rule, AL-5263 will not be miscible with other fluids including other AL-52xx Optical Fluids. For guidance on the best choice of fluid for a particular index matching problem, or for custom values of refractive index and/or technical issues, contact Technical Support at Fiber Optic Center.

Substrate Preparation

Substrates should be free of dust, oil, and fingerprint soils. Clean substrates using suitable industrial techniques for cleaning electro-optics. If hydrocarbon solvent cleaning (e.g. acetone) is used, a final rinse with reagent grade isopropanol is recommended. If the surface material is incompatible with acetone (acetone can soften or crack some plastics), use isopropanol. If aqueous detergent cleaning is used, multiple final rinses with de-ionized water or a single rinse with reagent grade isopropanol is recommended. Always use suitable lint-free wipes when cleaning sensitive optical substrates, lenses, cover glasses, coatings and other optical materials.

Cleanup

AL-5263 may be removed from surfaces by first wiping off excess fluid with a suitable dry lint-free wipe and then by wiping down the surface with a lint-free wipe soaked with acetone. If the surface material is incompatible with acetone (acetone can soften or crack some plastics), use isopropanol. If acetone residues are undesirable, the clean-up process should be completed with a final rinse with reagent grade isopropanol. The user is responsible for compliance with all applicable regulations governing disposal of waste materials as indicated in the MSDS.

Packaging

AL-5263 is available in the following packages:

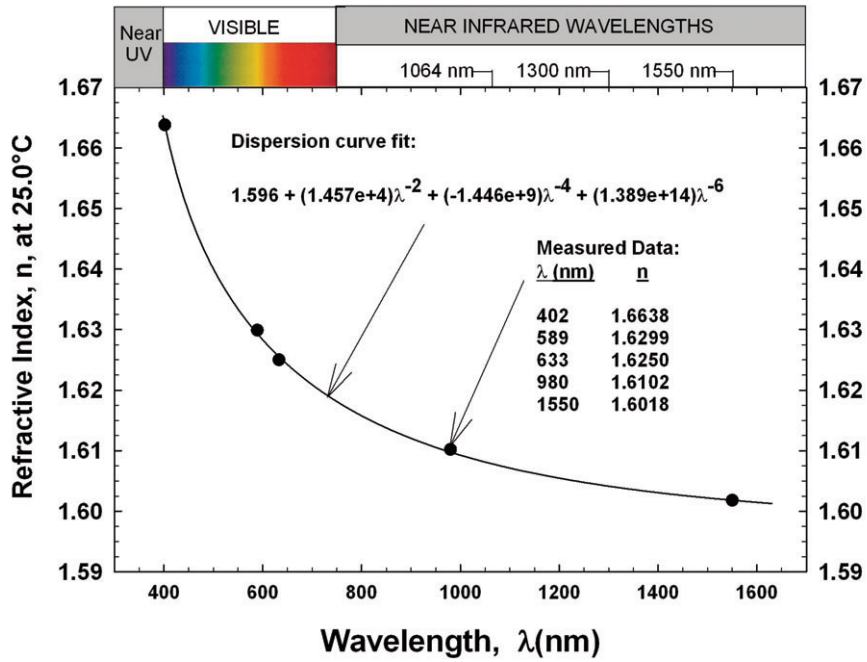
- 1cc syringe
- 10cc syringe

Other container options are also available for use with automated dispensing equipment. Contact Fiber Optic Center for assistance with special packaging, dispensing or private labeling requirements.

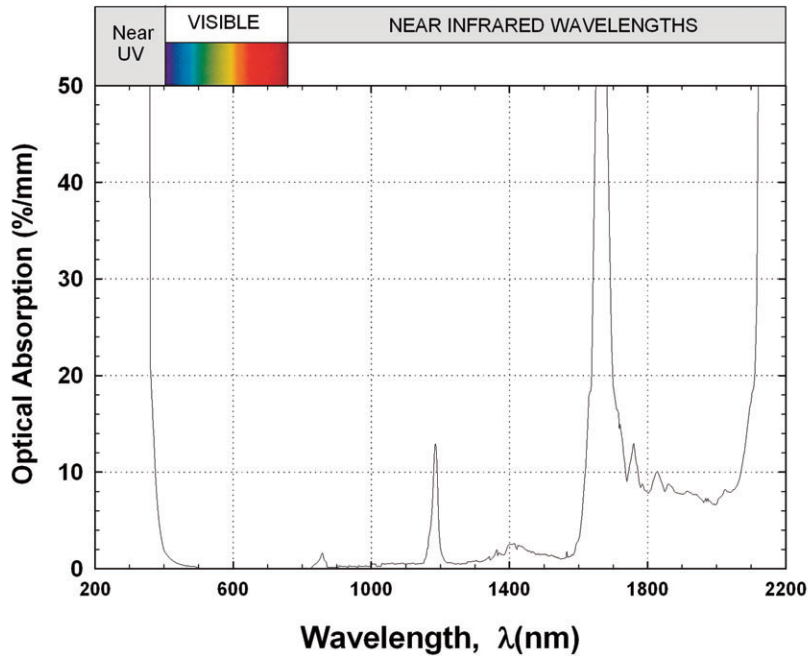
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Refractive Index vs Wavelength (25°C)
 AngstromLink Optical Fluid
 AL-5263



Optical Absorption vs. Wavelength
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Specifications

The typical properties quoted on this product data sheet should not be used as a basis for preparation of product specifications, and may change without notification. Because we cannot anticipate or control the many different conditions under which this information and our products may be used, we cannot guarantee the applicability of this information or the suitability of our products in any individual situation. Consult Fiber Optic Center for assistance with establishing specification limits and test conditions. Statements concerning the possible use of our products are not intended as recommendations to use our product in the infringement of any patent.

Shelf Life

AL-5263 is an inert fluid with no intrinsic shelf life limitations. It will, however, suffer changes in properties if removed from its original container and subjected to extreme environmental conditions, as indicated in the typical properties table on page 2, which tend to cause volatilization or thermooxidative breakdown, or alternatively through contamination with particles of dust, dirt or other solids or fluids.

Warranty

AL-5263 is sold without warranty, express or implied. Fiber Optic Center expressly disclaims any liability for incidental or consequential damages resulting from use of this product. The user is counseled to conduct thorough design and qualification studies prior to approval of AL-5263 for any production process or product component.

Safety

Consult the Material Safety Data Sheet (MSDS) for AL-5263 before use. AL-5263 is an industrial product, designed for use only by qualified laboratory or production personnel.

For Special Quotes and Technical Consultations

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