

Cold sealing adhesive for optical cables



AI Overview

Cold sealing adhesives for optical cables are typically epoxy or silicone-based compounds that provide moisture-resistant, optically clear, and thermally stable seals without heat curing.

Types of Cold Sealing Adhesives

- 1. Epoxy Adhesives:** Optical-grade epoxies are widely used for fiber optic bonding, sealing, and potting. They offer high bond strength, optical clarity, low thermal expansion, and dimensional stability. Many epoxies are formulated to cure at room temperature or via UV light, making them suitable for field repairs and delicate assemblies without heat exposure. They can be used for fiber splicing, connector potting, and sealing protective casings while maintaining signal integrity and minimizing insertion loss (Kohesi Bond, Hoenle, EPO-TEK® OG142-87).
- 2. Silicone-Based Sealants:** Silicone adhesives, such as RTV or moisture-curing types, provide flexibility, low internal stress, and excellent moisture resistance. They are ideal for applications where thermal cycling or vibration could stress the fiber, as they maintain alignment and prevent transmission loss. Some silicone pastes remain stable over a wide temperature range (-70°F to 400°F) and are non-curing, allowing easy handling and rework (EPO-TEK®, ASI Compound 70).

Key Properties

- Optical Clarity:** Prevents yellowing or light absorption, ensuring minimal signal loss.
- Moisture Resistance:** Low permeability adhesives protect fibers from humidity and water ingress, critical for outdoor or harsh environments (NTT-AT OS5958/OS5962).
- Thermal Stability:** Adhesives withstand extreme temperatures and maintain alignment of fibers.
- Low Outgassing:** Suitable for vacuum or hermetically sealed environments, meeting NASA ASTM E595 standards.
- Fast Curing Options:** UV-curable epoxies allow rapid setting after fiber alignment, reducing assembly time.

Applications

- Sealing fiber optic connectors and ferrules
- Potting splices and v-groove arrays
- Encapsulating optical sensors, camera modules, and laser assemblies
- Protecting fibers in armored or outdoor-rated cables
- Field repairs where h...

Article Content

EPO-TEK® OG142-87 | Fiber Optic Adhesive | Strong

EPO-TEK® OG142-87 is a UV curable epoxy for adhesive sealing/encapsulating fiber optic & optoelectronic packaging applications, with high bonding strength.

Adhesives & Epoxy for Fiber Optic Connector Termination

Epoxy, anaerobic, UV adhesives such as Epotek 353ND, Tra-con BAF series, Loctite 648, 7649 primer, Hysol 608, and more. Adhesive mixers & syringe dispensers.

Can You Glue Fiber Optic Cable? Understanding Adhesives in Fiber Optics ...

In the rapidly expanding world of data transmission, fiber optic cables are the backbone, delivering unparalleled speed and bandwidth. For manufacturers, engineers, and professionals

Fiber Splice Closure Sealing Methods | CRXCONEC Guide

Investing in robust sealing methods for fiber splice closures is non-negotiable to ensure a secure, reliable, and high-performing fiber optic network. It safeguards the cables from external

Product Applications

Atom Adhesives AA-BOND F253 High Temp Epoxy Adhesive, Low Visc, 2 Part, Fiber Optic Connectors Compare Quick view Atom Adhesives AA-BOND F112

Fiber Optic Epoxy and Adhesive Materials

Explore our IN-STOCK epoxy and adhesive materials for fiber optic components from top brands like Covestro, Dymax, Epo-Tek, Hernon and Hysol. Shop Now.

FIBER OPTIC — NextGen Adhesives | Fiber Optic,

NextGen Adhesives offers an extensive line of fiber optic adhesive technologies and a premier supplier for transceiver assembly and FTTH. Fiber optic applications

Fiber optic adhesives glue for fiber optic cable assembly and their ...

Fiber optic adhesives glue for fiber optic cable assembly and their benefits Adhesives for fiber optic are an important part of the whole system as they play a very integral role. These

Optical Grade Epoxy Adhesives | Fiber Optic Lens Bonding

Our adhesives offer phenomenal bond strength, dimensional stability, optical clarity and can withstand extreme temperatures and harsh environments. They can be customized to meet your specific

Optical Adhesives: A Technical Guide for Design

Optical adhesives are supporting advances in optical assemblies, collections of optical components and mechanical parts that precisely manipulate light for

Microsoft Word

While their structural bonding properties are inadequate for most fiber optic assemblies (as they do not adhere well to glass and have poor high temperature resistance), these adhesives excel at

Optical Properties of Adhesives, Sealants and Coatings

Whereas some optical assembly applications require optical clarity across a certain wavelength, others require an opaque coating. Optical grade epoxies, silicones

Adhesive Applications in Fibre Optics

Specially formulated Hoenle adhesives are used for joining fibre optic cables and waveguides The table below lists a selection of adhesives that are suitable for

Optical Adhesives and Sealants

Optical Adhesives available from StockOur broad range of state-of-the-art adhesives (glues) is used for fast, high-precision bonding of optical components, where the

Hermetic Epoxy Seals Protect Optical Fiber & Ensure Signal Quality

TRADITIONAL SEALS LIMIT DESIGNERS AND CAN AFFECT OPTICAL PERFORMANCE
While the need to properly seal fiber optic connection points is undeniable, not all seals are created equal.

Optical Adhesives

Optical Adhesives ideal for bonding or cementing optical components together or to an optical system for other applications are available at Edmund Optics.

Hermetic Epoxy Seals Protect Optical Fiber & Ensure Signal Quality

WHITEPAPER Hermetic Fiber & Ensure Epoxy Seals Protect Optical Signal Quality
EPOXY TECHNOLOGY CREATES A RELIABLE HERMETIC SEAL FOR FIBER OPTIC
INSTALLATIONS

Epoxy and Adhesive Selection Guide for Fiber Optic

Read our in-depth guide on the selection, application, and proper usage of epoxies and adhesives to ensure long-term reliability of fiber optic

Optics and Optoelectronics

To secure fibre-optic cables, fibre arrays and waveguides, Hoenle has developed special adhesives tha can allow an unimpeded transmission of light at optical

Hermetic Epoxy Sealing for Fiber Optic cables

Douglas Electrical Component's OptiSeal™ provides custom hermetic seals for any fiber optic cable configuration, ensuring reliable performance in various applications.

Optical Grade Epoxy Adhesives | Fiber Optic Lens Bonding

Kohesi Bond's optical grade adhesives deliver precision bonding for fiber optic cables, camera modules, laser assemblies and electro-optical sensors. Crystal clear, UV-stable and low birefringence

Fiber Optic Epoxy Adhesive | Epoxy International

AA-BOND F112 is a fast cure, low viscosity, fiber optic epoxy adhesive formulation for bonding fiber optic bundles, potting glass fibers, and terminating fiber optic

Adhesive Applications in Fibre Optics

The table below lists a selection of adhesives that are suitable for joining, reinforcing and sealing fibre cables, fibre-chip interfaces and fibre arrays. Further products

optical adhesives, dispensing, curing & fume extraction

Our state-of-the-art adhesives are used for bonding of optical components, where the adhesive is index matched to the used components. While highly specialized, the adhesives are especially designed to

Fiber Optic Cable Glue: A Manufacturer's Guide to Incure Adhesives

Incure's innovative UV-curable adhesives are designed to meet these evolving needs, empowering manufacturers and professionals to achieve unparalleled precision, speed, and reliability

Fiber Optic Bonding Epoxy Adhesive Glue Manufacturer

Fiber optic adhesive is a critical component in the manufacturing and installation of fiber optic cables. It is used to bond the fiber optic connectors and ferrules to the

Fiber Optic Adhesives

Optical and fiber optics assembly and manufacturing require fast setting UV adhesive or 2 component epoxy with high clarity that provides excellent fixing

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://energy-powertools.eu>

Email: info@energy-powertools.eu

Phone: +49 172 6389472

Address: Musterstraße 12, 10115 Berlin, Germany

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