

Fiber Optic Cable Sheath Material List



Article Overview

Fiber optic cable sheaths are typically made from materials like PVC, PE, LSZH, HDPE, LDPE, or specialized armored compounds, chosen based on environmental and safety requirements.

Common Sheath Materials

1. PVC (Polyvinyl Chloride) PVC is widely used for indoor fiber optic cables due to its flexibility, chemical resistance, and low cost. It provides basic flame retardancy but produces dense smoke and toxic gases when burned, making it less suitable for fire-sensitive environments . 2. PE (Polyethylene) PE sheaths are common for outdoor cables because of their excellent UV resistance, low water absorption, and durability in extreme temperatures. Variants include MDPE (medium density) and HDPE (high density), with HDPE offering higher toughness for feeder and distribution cables . 3. LSZH (Low Smoke Zero Halogen) LSZH sheaths are designed for fire safety, producing minimal smoke and no toxic halogen gases. They are ideal for indoor installations where fire regulations are strict. LSZH also provides good tensile strength and oil resistance but can be more brittle than PE . 4. LDPE (Low-Density Polyethylene) LDPE offers greater flexibility than HDPE and is sometimes used as a compromise for outdoor cables where some flexibility is needed, though it is less durable under harsh conditions . 5. Specialized Sheaths

- Flame-retardant PE: Used in mines or high-risk fire areas.
- Armored sheaths: Include steel or aramid layers for mechanical protection and rodent resistance, suitable for underground, tunnel, or submarine installations .
- Polyurethane (PU): Often used for underwater or submarine cables due to its abra...

Article Content

Jul 08, 2026

Indoor optical cable outer sheath material

Indoor fiber optic cables are an essential component of modern telecommunications infrastructure, providing fast and

Dec 14, 2025

Fiber Optic Cable Components: Full List & Explain

Every part of the fiber optic cable plays a critical role in determining its speed, data security, and durability. In this article, we will

May 05, 2026

Application Notes

Armored Versus Non-armored Cable Armoring increases the strength and robustness of a cable relative to its surroundings. The

Mar 13, 2026

Fiber optic cable Catalog

Fiber Optic Cables Technical Catalogue FTTH Optic Fiber Micro Cable Sample Fiber Optic Micro Cable Optical Fiber Core

Nov 24, 2025

Tipos de cubiertas en Cables de Fibra Optica | KeyFibre

Types of sheaths used in Fibre Optic Cables Each type of fibre optic cable sheath has its differences, mainly, its function is to cover

Feb 18, 2026

Fiber Optic Cable Materials Used In Manufacturing

The fiber optic cable materials is quite important, for it directly affects the quality and performance of a fiber optic cable. Get a quick

Feb 18, 2026

Fiber Optic MPO Cable Sheaths: LSZH, OFNP, OFNR, Armored

The material of the outer sheath of MPO/MTP cable directly determines its fire rating, wear resistance, and applicable

Jul 04, 2026

Fiber optic cable outer sheath why important? What material?

Obviously, financial return is important in manufacturing fiber optic cable, but I think that's not enough. I think many customers want

Sep 04, 2025

Cable Sheath Types Explained: LSZH vs HDPE vs LDPE

Understand the differences between LSZH, HDPE, and LDPE cable sheaths and where each is used in FTTH.

Dec 12, 2025

28 Selection_of_the_Correct_Optical_Cable

Introduction This Cable Jacket Selection Note is intended to provide the reader with an organized selection methodology when

Aug 19, 2025

Fiber Optic Cables

Armoured and Flame retardant optical fibre cable, AICI - code F104 NEK TS 606:2016 (available also in MUD protected version).

Feb 20, 2026

Fiber Optic Cable Components & Materials: Complete Technical Guide

Explore the 5 key fiber optic cable components and materials used in modern networks. Learn how glass, coatings,

Sep 20, 2025

Cable Jacket Material: How to Choose

Cable Jacket Material Comparison Both network cables and fiber optic cables have different cable jackets to choose

Feb 04, 2026

Sheathing Types

Sheathing opacity controls the effects of outside light, and any light leaking from the fiber to optimize the application effect. When

Aug 29, 2025

Fiber Optic Cables Selection Guide: Types, Features, Applications ...

Fiber optic cables are composed of one or more transparent fibers enclosed in protective coverings and strength members. Fiber

Sep 21, 2025

What Are the Raw Materials of Fiber Optic Cables? Full Guide

A complete guide to the raw materials of fiber optic cables—optical fibers, PBT tubes, FRP rods, aramid yarn, steel

Dec 19, 2025

The Importance And Selection Of Outer Sheath Materials And Fire ...

Why is the outer sheath of fiber optic cables important? What are the materials available? Fiber optic cables are

Feb 28, 2026

PROPERTIES OF SHEATHING MATERIALS FOR OPTICAL FIBER

Standard LSZH (Low Smoke Zero Halogen) material is produced from polyolefin's and is filled with flame-retardants in the form of

Aug 24, 2025

Fiber optic cable outer sheath material

Data center cables are intricate, converged, scattered, and extend to every part of the data center. Therefore, the

Jul 25, 2026

3 Fiber Optic Cable Sheathing Requirements

According to different laying methods, 3 requirement of fiber optic cable sheathing must be considered in

Jul 14, 2026

OUTER JACKET MATERIALS

Please refer to the Product Specifications sections located in the OCC Product Catalog for the various cable types and fiber counts

Jun 10, 2026

Fiber Optic MPO Cable Sheaths: LSZH, OFNP, OFNR, Armored

Discover the best fiber optic cable sheath for your MPO fiber optic cable assemblies from the fire rating, wear

Apr 29, 2026

Cable Sheath Types Explained: LSZH vs HDPE vs LDPE

Understanding Cable Sheath: LSZH vs HDPE vs LDPE In FTTH and FTTx networks, cable sheath material is often

Oct 03, 2025

Fiber-optic cable

A fiber-optic cable, also known as an optical-fiber cable, is an assembly similar to an electrical cable but

Mar 19, 2026

Fiber Optic Cable Outer Sheath Material and Fire Rating

What are their materials? Fiber optic cable is generally composed of fiber optic core, cladding, coating, reinforcing element and outer

May 24, 2026

Fiber Optic Cable Sheath and Water Barrier

Water Blocking Filling Compounds Filling compounds are used in fiber optic cables to prevent the ingress of water into the cables.

Jul 11, 2026

18 Cable Sheath Materials Explained

Discover 18 types of cable sheath materials. Full comparison of fire resistance, flexibility, environmental tolerance, and

Contact Us

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

Website: <https://khanimamboguesthouse.co.za>

Email: sales@khanimamboguesthouse.co.za

Phone: +27 64 852 1973

Address: Unit 7, Greenway Business Park, 8 Innovation Drive, Centurion, 0157, South Africa

This document is for informational purposes only. Specifications subject to change without notice.

