

## Fibre Cable Outer Jacket Material Types

The more popular types of outer jacket materials are as follows.

Material	Characteristics and Uses
<b>PVC (Polyvinylchloride)</b>	Most commonly used material for outer jacket. It is low cost, strong, flexible, fire resistant and can be used in many applications. Primarily used for Indoor applications
<b>PE (Polyethylene)</b>	Very good electrical properties while maintaining high insulation. PE cables may be firm and solid. Indoor and Outdoor applications.
<b>PVDF (Polyvinyl Difluoride)</b>	Has more flame-resistant properties than the PE cable. Primarily used for Indoor plenum areas.
<b>PUR (Polyurethane)</b>	PUR is very flexible and scratch resistant that is mainly used in low-temperature environments. Indoor and Outdoor applications
<b>LSZH (Low Smoke Zero Halogen)</b>	LSZH is less toxic than PVC. It has a flame-retardant outer cover that doesn't produce halogen when heated. Mainly used in confined installations. Indoor and Outdoor applications
<b>NY (Nylon)</b>	Good electrical properties while maintaining high insulation. Nylon aids in the ease of installation due to its slippery property, and because of this feature it is considered a low-cost armour against sharp objects and insects. It is normally used as second sheath over another cable material like PE. Primarily used for Outdoor applications.

**Plenum Area;** is a space used to move air to workspaces for the purpose of ventilation or to form air flow for an air distribution system. Normally Horizontal

**Riser Area;** are tubes, channels or shafts between floors. Normally Vertical

**General-Purpose Area;** is all other areas that are not plenum or riser on the same space or floor.

## Fire Rating Levels

There are four levels of fire resistance for fibre cables.

Each level has two divisions which are the conductive and non-conductive cables.

- OFNP (Optical Fibre Nonconductive Plenum) and OFCP (Optical Fibre Conductive Plenum Cable). These are used in plenum areas and have resistance to fire and smoke.
- OFNR (Optical Fibre Nonconductive Riser) and OFCR (Optical Fibre Conductive Riser) are used for the riser areas. These cables must prevent/slow fire moving from one floor to another.
- OFNG (Optical Fibre Nonconductive General-Purpose) and OFCG (Optical Fibre Conductive General-Purpose Cable). Must not spread the fire for more than 4 feet, 11 inches.
- OFN (Optical Fibre Nonconductive) and OFC (Optical Fibre Conductive). The flame shall not infiltrate floors or ceilings and the cables are also used for general purpose areas.

## Comparison between the OFNR and LSZH Cables

**OFNR Cables;** cables are used for riser applications. They are non-conductive and resistant to oxidation and degradation.

**LSZH Cables;** are made of special flame-resistant coating, and outstanding fire protection features such as low smoke, toxicity corrosion. LSZH cable jacketing is made of thermoplastic or thermoset compounds that produce little smoke and no halogen in case of fire.

atg Technology Group only stock Tight Buffer cables with LSZH jacket material with the OFNR rating, which gives you the safety you need with the low smoke and toxicity, plus enables you to use the cable in riser-rated environments.