Fiber optic cable flame retardant grade B

Article Overview

B2ca fiber optic cables are high-performance, flame-retardant cables designed for critical building installations, offering minimal flame spread, low smoke emission, and zero halogen content.

Overview of B2ca Flame Retardant Cables

B2ca is a CPR (Construction Products Regulation) reaction-to-fire class under EN 50575, indicating very high fire performance suitable for building installations . These cables are engineered to limit heat release and flame propagation, ensuring safety in environments where fire risk must be minimized. Optional sub-classes define additional safety characteristics:

o s1a/s1b: smoke emission
o d0/d1: flaming droplets/particles
o a1: acidity of gases released A fiber optic cable marked B2ca-s1a,d1,a1 provides low smoke, zero halogen emissions, and minimal corrosive gas release, making it ideal for hospitals, airports, tunnels, data centers, and industrial plants .

Key Features

o Fire Performance: Maintains optical signal integrity under extreme heat and flame, ensuring continuous data transmission during fire conditions .
o Safety: Low smoke and zero halogen content protect both personnel and equipment.
o Mechanical Durability: Resistant to impact, bending, and environmental stress during and after fire exposure.
o Global Compliance: Fully CPR-compliant and recognized under EU and international standards, suitable for indoor and outdoor installations .
o Flexible Deployment: Can be installed in vertical shafts, tight bends, and critical infrastructure routes.

Applications

B2ca-rated fiber optic cables are commonly deployed in:

o Public buildings: Airports, railway stations, stadia
o Industrial facilities: Onshore/offshore plants, data centers
o Emergency-critical systems: Fire alarm networks, communication backbones in tunnels and hospitals

Standards and Testing

These cables are tested according to EN 13501-6 for reaction-to-fire performance and may also meet FE180 fire-resistance standards, ensuring they maintain functionality during fire exposure . For indoor applications in the U.S., similar flame-retardant cables comply with UL 1651 and NFPA 262 standards, covering riser (OFNR) and plenum (OFNP) installations .

Summary

B2ca fiber optic cables provide a combination of high flame retardance, low smoke, zero halogen emissions, and mechanical resilience, making them suitable for critical infrastructure and high-safety environments. When selecting a cable, ensure it meets the required CPR sub-classifications for smoke, droplets, and acidity to match the specific safety requirements of your installation.

Cable specialist Draka, part of Prysmian Group, offers a complete range of high fire safety

Indoor and outdoor, flame retardant, LSZH or PVC, loose tube, Armored SWA (Steel wires Armor), SWB (Steel wires Braid) or CST

When it comes to the characteristics of cable during fire, Grade B1 is also more

Corning Optical Communications manufactures quality flame retardant optical fiber cables for indoor applications, which comply with

APPLICATION Optical cable for indoor and outdoor use in vital communication and emergency systems that need to be operational

This FireTuf fibre range is fully compliant with fire resistant standards IEC 60331-25 and flame retardant

Explore the impact of fire ratings and jacket materials on fiber optic cable performance.

Compare fiber optic cable jackets and fire ratings (OFNP, OFNR, LSZH). Learn which type

Find your flame-retardant optical cable easily amongst the 50 products from the leading brands (Liebherr,

Learn about fiber optic cable jackets, materials, and fire ratings. Find the right jacket for

The inner and outer protective layers of YOFC electric high-voltage flame-retardant cable are made of ETFE, TPU, LSZH and other

Fire-rated cable has been a very popular product type in the cable industry, third-party testing of fire-rated

cable

Lifeline® QFCI Fire Resistant Fiber Optic Cable Survivability in a Fire for Vital Communication and Emergency Systems Regulators

Tests on electric and optical fiber cables under fire conditions - Part 3-25: Test for vertical flame spread of vertically-mounted

3.2 The fibers shall not adhere to the inside of the jacket. 3.3 Each fiber shall be distinguishable by means of color coding in

A cable claiming "halogen-free" should reference IEC 60754 test results or equivalent. Flame-retardant options beyond jacket

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