

#smartconnection

Telecom Solution



**FLOWGUARD™**

**Fire resistant optical  
fibre cables**

[www.aginode.net](http://www.aginode.net)



# FLOWGUARD™

## The new generation of fire resistant cables for safety circuits in public buildings

These multi micromodule cables are designed for indoor/outdoor installation in tunnel infrastructure, and public building such as hospitals, railway stations, airports,...and more.

Thanks to very high fire performance, FLOWGUARD™ is the best choice for fire safety and critical telecom communication systems (FTTx).

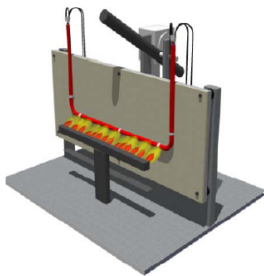
FLOWGUARD™ offers new properties which make it easier to handle and install thanks to the Fibre Reinforced Plastic (FRP) armouring. This brings flexibility and lower bending radius than corrugated steel armoured cables.

The FRP armouring also provides a high rodent protection. These cables can operate under a wide temperature range and are waterproof. FLOWGUARD™ requires no grounding compared to metallic armoured cables.

## The highest fire performance

### Fire resistance EN 50200 : 120 minutes

EN 50200 / IEC 60331-2  
(U-shaped mounting on a refractory plate)



#### Characteristics of the sample

- Cable diameter : ≤ 20mm
- Minimum length : 1200mm / test

#### Characteristics of the test

- Flame temperature : 850°C
- Mechanical shock : every 5 minutes
- Bending radius : cf. cable manufacturer
- Voltage : cable rating
- Time : 15 - 30 - 60 - 90 - 120 min

#### Required condition

Operational continuity ≥ 15 - 30 - 60 - 90 - 120 min

### CPR Rating : B2ca-s1a, d0, a1

- **Essential characteristic:**  
reaction to fire
- **Performance:**  
B2ca-s1a, d0, a1
- **Harmonized standard according to**  
EN 50575/2014+A1:2016

## Micromodules design up to 72 fibres

FLOWGUARD™ cables have a central FRP strength member surrounded by micromodules, each with a maximum of 12 fibres per bundle. The design is reinforced by a layer of aramid yarns, a LSZH inner sheath, FRP armour and a LSZH outer sheath.

A ripcord is placed beneath the inner and outer sheath for easy access to the micromodules.



Flame retardant  
IEC 60332-1



Fire retardant  
IEC 60332-3

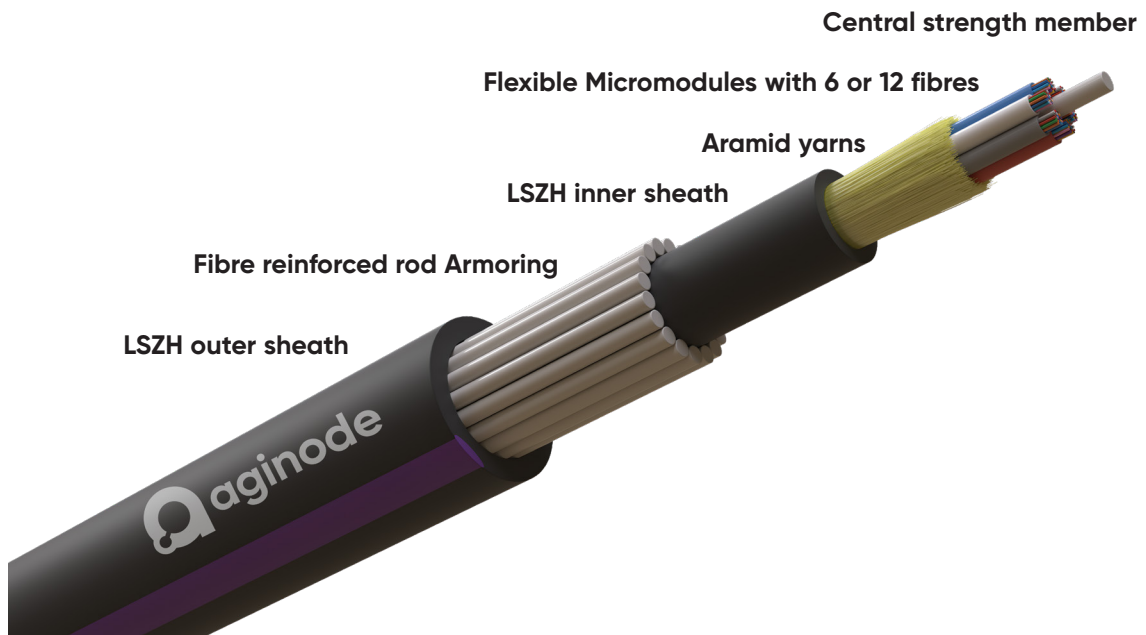


Smoke density  
IEC 61034-2



Fire resistant  
EN 50200 (PH90)

## Structure of the cable



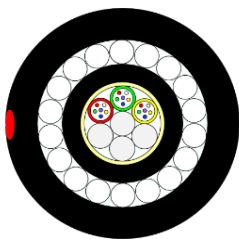
### Dimensional characteristics

Nominal outer diameter	12.4mm
Approximate weight	172 Kg/km

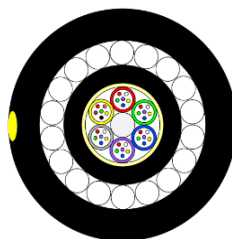
### Mechanical characteristics

Maximum installation tension	6000 N
Maximum permanent tensile load	2 kN
Crush resistance (IEC 60794-1-E3)	300 N/cm
Mechanical resistance to impacts	10 impacts of 3 N.m

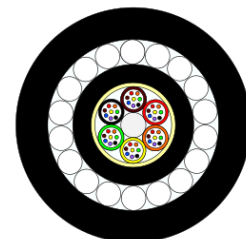
## Some examples with different combinations in modularity and fibre counts



18OF : 3x6



36OF : 6x6



48OF : 6x8

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