

# Fire protection for cable

All the fiber optic cables for inhouse cabling in this catalogue are made in **FRNC (LSFROH)** versions.

<b>FR</b>	Flame Retardant
<b>NC</b>	Non Corrosive
<b>LS</b>	Low Smoke
<b>OH</b>	Zero Halogen

There is good reason for this – safety for persons, buildings and installations in the case of fire. LEONI GigaLine® data cables with a sheath made of halogen-free and flame-retardant material are the better alternative to PVC in this respect, as their mechanical properties are fully guaranteed.

PVC used to be a preferred choice of cable sheath material for cost reasons. Initially PVC displays good flame-inhibiting properties; its exposure to flames is accompanied, however, by severe loss of plasticizer components through vaporization, reducing the flame-retardant effect. Furthermore, the halogens contained in PVC can result in the emission of toxic dioxin, which along with carbon monoxide emissions constitutes a major hazard for people.

In a fire PVC also results in the formation of chloric acid gas, which is highly corrosive and attacks both metal surfaces and reinforced concrete. The damage caused to a building by corrosion is generally greater by a multiple than that caused by the actual fire.

### Advantages of FRNC cables compared to PVC cables:

FRNC contains absolutely no halogen and is non-corrosive, for that reason no dioxins and no corrosive gases are emitted. Exposure to



flames creates water vapor, which absorbs heat and therefore quenches the burning cable.

All LEONI GigaLine® fiber optic indoor and outdoor cables pass the extensive fire behavior tests laid down in IEC 60332-1 (DIN VDE 0472 Part 804 B) and in addition to the stricter bundle fire test according to IEC 60332-3, Category A durchgeführt (DIN VDE 0472 Part 804 C).

Smoke production of FRNC is very small compared to PVC and is measured compliant with IEC 61034-1 and 61034-2. Both tests are necessary for verification of minimum smoke production. Absence of halogen is tested in accordance with IEC 60754-2. The most dangerous component for people in the event of a fire is carbon monoxide. FRNC produces only about 1/5th of the volume of carbon monoxide created by PVC.

### The advantages of FRNC cables at a glance:

- no self-propagation of fire along the cable
- relatively low toxicity of gases emitted in a fire
- no production of corrosive gases
- no dioxins in the remains of the fire
- minimum smoke production

