# Sleep tight.

Our NHXMH installation cable is LSOH, safe and sound.

Made in Germany



Prysmian Group


Securing the safety of
people and buildings.

# Our NHXMH installation cable is LSOH, safe and sound.

Is there anything more rewarding than going to bed and knowing you've done a good job? Like having installed flame-retardant cables in someone's home? Our new CPR class D cable NHXMH is a Low Fire Hazard cable, which exposed to fire has a low rate of flame spread and at the same time releases less heat. Being halogen free the cable also emits less toxic smoke and corrosive acids in the event of fire, compared to conventional PVC cables. And, as it's manufactured at our plant in Schwerin, we can guarantee top notch German quality. It'll work like a dream.

## NHXMH 300/500 V

### Application

The insulated wire NHXMH with better properties in case of fire is suited for installations in buildings and industries. It can lay in, on and under plaster in dry, humid and wet rooms in concrete without shake and tamp concrete. The wire can also be laid outdoors, but only if protected against direct sunlight. Not suitable for an installation in ground or water. Furthermore applies DIN VDE 0250-214.

## MAIN FEATURES

- CPR class $D_{ca}$-s1b,d2,a1
- Low Fire Hazard Cable – limited flame spread and less heat
- Low Smoke Zero Halogen – less toxic smoke and corrosive acids
- Made in Germany – top notch quality and short lead times

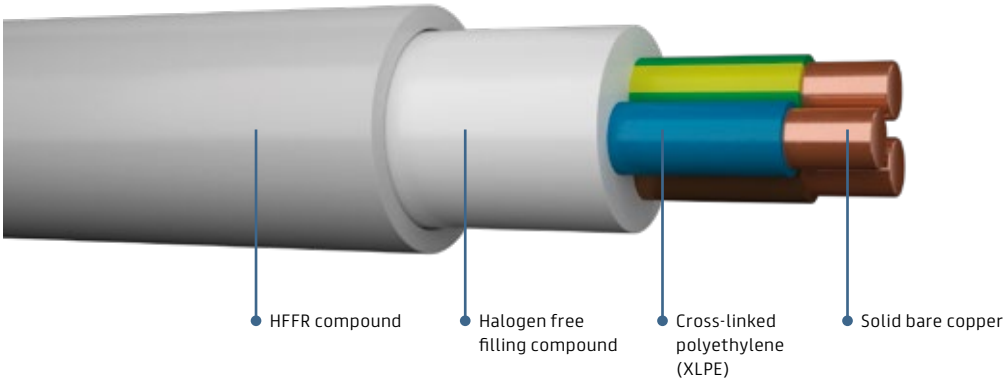
## No paper? No problem!

For this new NHXMH cable we left out the paper to increase its flame retardance.

Normally that would make the cable harder to strip, but don't worry. Thanks to our R&D team, the cable is actually easier to work with compared to traditional ones. Additionally, being LSOH means it is much safer in case of fire, too.



# NHXMH 300/500 V




| NHXMH 300/500 V | |
|---|---|
| **Global data** | |
| Type designation | NHXMH |
| Standard | DIN VDE 0250-214 |
| CPR fire class | $D_{ca}$ |
| CPR DoP-Code | 1011190 |
| **Construction characteristics** | |
| Conductor | Solid bare copper |
| Insulation | Cross-linked polyethylene (XLPE) |
| Core identification | Colours of cores acc. to DIN VDE 0293-308 |
| Inner covering | Halogen free filling compound |
| Outer sheath | HFFR compound |
| Outer sheath colour | Light grey |

| NHXMH 300/500 V | |
|---|---|
| **Electrical parameters** | |
| Rated voltage | 300/500 V |
| Max. permissible operating voltage AC | 0.550 kV |
| Max. permissible operating voltage DC | 0.825 |
| **Thermal parameters** | |
| Max. operating temperature of the conductor | 70 °C |
| Max. short circuit temperature of the conductor | 160 °C |
| Laying temperature min. | 5 °C |
| **Mechanical parameters** | |
| Bending radius fixed min. | 4 x Diameter |

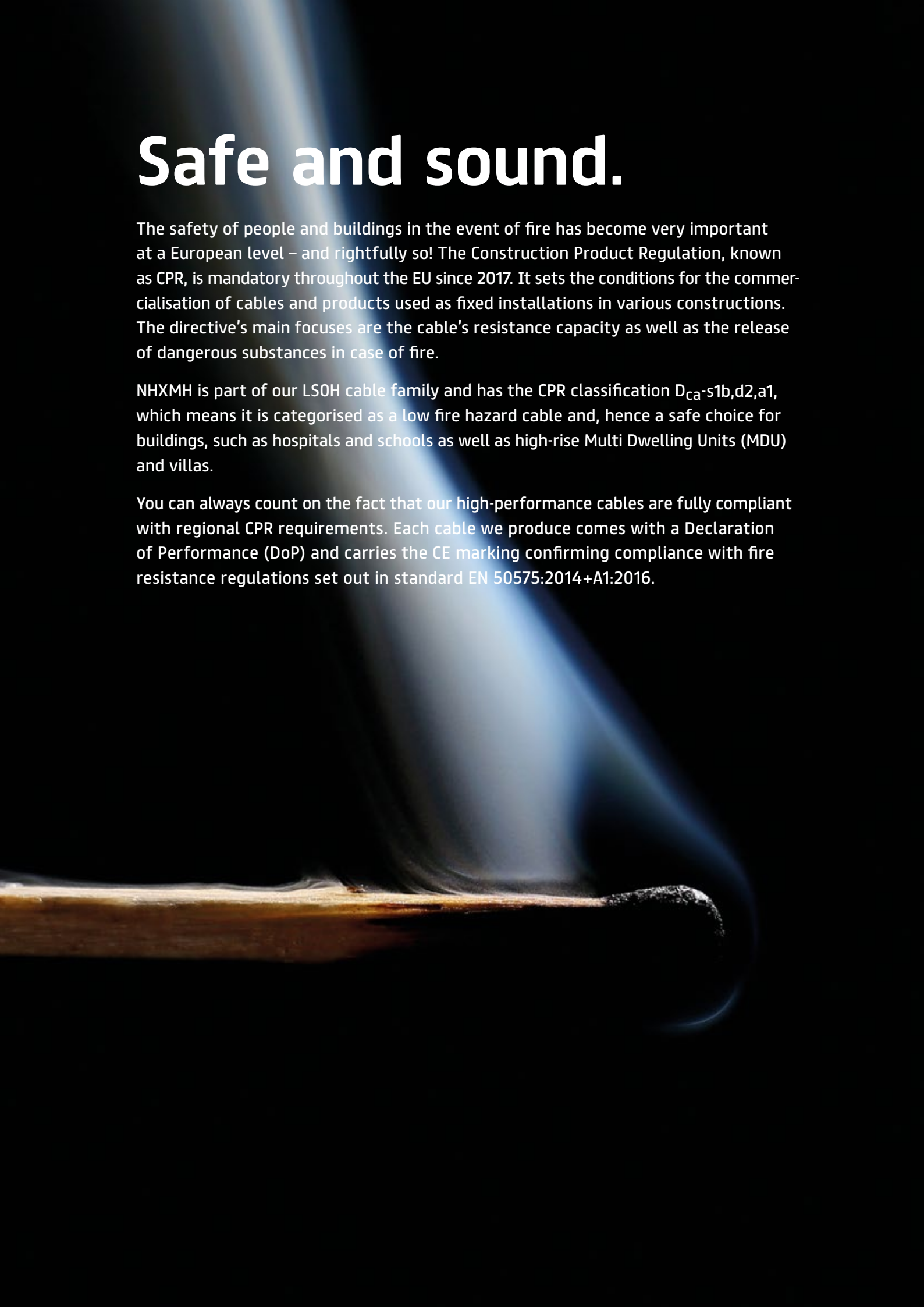
| NHXMH 300/500 V | | | | | | | |
|---|---|---|---|---|---|---|---|
| Number of cores x cross section | Part number | Insulation thickness nom. mm | Outer sheath thickness nom. mm | Outer diameter nom. mm | Weight (approx.) kg/km | Packaging | Length m |
| 3x1.5 RE | 20321029 | 0.5 | 1.4 | 8.2 | 105 | Drum | 500 |
| 3x1.5 RE | 20321028 | 0.5 | 1.4 | 8.2 | 105 | Ring | 100 |
| 3x2.5 RE | 20327621 | 0.5 | 1.4 | 8.8 | 140 | Drum | 500 |
| 3x2.5 RE | 20321030 | 0.5 | 1.4 | 8.8 | 140 | Ring | 100 |
| 5x1.5 RE | 20328903 | 0.5 | 1.4 | 9.2 | 145 | Drum | 500 |
| 5x1.5 RE | 20327622 | 0.5 | 1.4 | 9.2 | 145 | Ring | 100 |
| 5x2.5 RE | 20327625 | 0.5 | 1.4 | 10.3 | 200 | Drum | 500 |
| 5x2.5 RE | 20327624 | 0.5 | 1.4 | 10.3 | 200 | Ring | 100 |

# Safe and sound.

The safety of people and buildings in the event of fire has become very important at a European level – and rightfully so! The Construction Product Regulation, known as CPR, is mandatory throughout the EU since 2017. It sets the conditions for the commercialisation of cables and products used as fixed installations in various constructions. The directive's main focuses are the cable's resistance capacity as well as the release of dangerous substances in case of fire.

NHXMH is part of our LSOH cable family and has the CPR classification $D_{ca}$-s1b,d2,a1, which means it is categorised as a low fire hazard cable and, hence a safe choice for buildings, such as hospitals and schools as well as high-rise Multi Dwelling Units (MDU) and villas.

You can always count on the fact that our high-performance cables are fully compliant with regional CPR requirements. Each cable we produce comes with a Declaration of Performance (DoP) and carries the CE marking confirming compliance with fire resistance regulations set out in standard EN 50575:2014+A1:2016.



## SAFE CABLES BENEFIT ALL!

New technologies, urbanization as well as an increase in population intensify the demand for electricity. We build higher and higher buildings, new schools, hospitals, sport arenas and much more. Every construction – whether it is a building or a bridge, a machine or an underground railway – needs electricity. And cables. Lots of cables.

In this scenario it is vital that we choose wisely as cables can be dangerous, even lethal, if they aren't flame-retardant. According to statistics published by the international association of fire and rescue services, Centre of Fire Statistics (CTIF), during 2016 more than 49 % of all fires in the world reported to CTIF took place in structures and vehicles. Only in that year, more than 14,000 individuals died in these fires. On top of that, in 70 % of cases, fatalities in a fire are due to the inhalation of toxic gases and smoke – in large parts caused by cables not living up to the task.

People's safety is not an option, and that is why it is so crucial to choose Low Smoke Zero Halogen (LSOH) cables such as NHXMH.

## CABLE PERFORMANCE

In order to facilitate the evacuation process of people in case of fire, it is paramount that cables do not promote the spread of fire and, in addition, only develop small amounts of toxic gases or dark impenetrable smoke.

### Fire spread

Cables that aren't flame-retardant will quickly spread the fire inside the walls. Several times fire patrols are convinced they have put the fire out, but all of a sudden it starts burning higher up in the building. Safe cables shall be able to resist spreading.

### Burning droplets

Once a cable caught fire, burning droplets of insulation, filler and sheathing material can fall off and set fire to surrounding objects.

### Acid gases

Cables, which emit acid gases are, of course, a threat to people's lives. Studies show that in 70 % of cases the inhalation of smoke and gas – not the least from PVC cables – are the main cause of death.

### Smoke density

Halogen free cables that don't emit black and toxic smoke are key in case of a fire emergency. Smoke density tests show that the visibility level should not decrease more than 40 %. With NHXMH, as with all other Prysmian LSOH cables, there is a reduction of only 20 %. In comparison, standard PVC cables have visibility losses of up to 70 %.



| LSOH-cables | PVC-cables |
| --- | --- |
| Reduced smoke formation. | Heavy smoke formation. |
| Light smoke, easier to evacuate. | Black smoke obstructs the evacuation. |
| Fewer toxic gases. | Lots of toxic gases. |
| Creates a white harmless powder that spares metals and electronic devices. | Creates hydrochloric acid that destroys electronics and corrodes metals. |
| Easier to renovate, shorter production interruption. | Inhibits renovation, longer production interruption. |
| Better for the environment, contains no phthalates and dioxin. | Harmful to the environment, contains phthalates and dioxin. |



# Linking the future

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