

High-performing CPR compliant cables reduce fire safety risks





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Using cables compliant with required levels of fire safety reduces the risks of fire propagation, this is the result of a **test*** conducted by the Netherlands Fire Service Academy - partner to EuroFSA - in May 2021. The test shows the difference in burning behaviors of high-performing cables and basic performance cables in a realistic environment.

Electrical safety issues are mainly the result of unsuitable design of the electrical installation, inappropriate use of the installation or a lack of proper maintenance. Moreover, poor and sub-standard electrics and fraudulent products are finding their way into the market, increasing the risk of electrical safety issues.

→ Therefore:

- Appropriate regulations must ensure that a building, whether newly built or renovated, is fireproof.
- All construction products should comply with requirements. In particular, Construction Products Regulation (CPR) compliant cables, reflecting the appropriate CPR classification, should be used in buildings to ensure the required level of fire safety.
- Member States should increase market surveillance activities to ensure that only compliant products, including cables are put on the market.

What is the Construction Products Regulation (CPR)? And why does it matter?

The CPR provides a common technical language to assess the performance of construction products. It ensures that reliable information is available to professionals, public authorities, and consumers, so that they can select the right cable with the appropriate performance for the fire risk of the construction. Compliance with CPR is, therefore, paramount to ensure proper fire safety levels in buildings all across Europe.



Electricity has become a vital part of everyday life and its demand will considerably increase in the future. However, in addition to the benefits it brings, electricity can be dangerous: every year, about 5000 people in the EU die because of a residential fire, which in some cases (26% in the Netherlands) is the result of an electrical problem in equipment or installations.

It is important that cables are compliant with the CPR: using cables not in line with required classifications and levels of fire safety increases the risk of electrical safety issues which can result in a fire or a fire propagating faster than with classes of cables supporting appropriate fire safety performances.

* The test report is accessible **here**

This test has been commissioned by Europacable. Europacable is the voice of Europe's leading wire and cable manufacturers. More information at **www.europacable.eu**



Impression test on burning behaviour of cables



The test conducted by the Netherlands Fire Service Academy emphasizes the importance of the fire safety performance of cables. It turns out that a fire develops slowly with high performance cables reaching its maximum size after 10 minutes and does not propagate outside the directly affected section. In contrast, with basic performance cables, the fire develops very quickly reaching its maximum size after 4.5 minutes with burning droplets falling onto the floor; after 10 minutes the cables are completely burned away.

Risk for fire safety



A fire in just a set of cables (high or basic performance) will not directly be a threat for the possibility of escape and survivability. However, a fire involving basic performance cables in a furnished room (e.g. office environment) can cause a rapid fire propagation resulting in an impaired escape and fatal conditions within 5 – 7 minutes and a flashover within 7 to 8 minutes. In order to prevent cables from being an ignition source and fire propagator it is important that cables are fire safe and thus have a high performance.

Conclusion

CPR compliant cables themselves are safe and do not represent a direct threat to life. However, basic performance cables may become a vehicle for fire propagation when ignition starts in another source. This is why the choice of cables is key to either prevent or reduce fire propagation. In this respect, the study makes it clear that, using basic classes of cables not in line with required levels of fire safety increase the risk of electrical safety issues which can result in a fire propagation with the unacceptable risks for the level of fire safety.



