



## **Solid Copper vs. Copper Clad Aluminium (CCA) Ethernet Data cables**

The use of Copper Clad Aluminium (CCA) cable as an alternative to solid copper cable in the data cabling industry is a non-compliant practice with serious drawbacks. While CCA cables may offer cost savings initially, they fail to meet industry standards and compromise performance and safety.

Solid copper cables have long been the gold standard in Ethernet cabling for good reason. Copper's superior conductivity results in lower resistance, minimising signal loss and ensuring high-quality transmission. This is especially critical for applications like Power over Ethernet (PoE), where any increase in resistance can lead to overheating issues. In contrast, CCA cables, with their aluminium core, struggle to match the conductivity of copper, leading to increased heat generation and safety concerns, particularly under heavy loads. Consequently, CCA cables are not suitable for PoE applications and are limited to lower-speed Ethernet categories.

While the primary allure of CCA cables is their lower cost, the compromises in performance and safety outweigh any potential savings. Solid copper cables consistently outperform CCA cables in signal transmission, heat production, and flexibility, making them the preferred choice for reliable network installations.

Furthermore, the use of CCA cables raises compliance issues. They lack recognition from major standards authorities and are not approved for internal cable use by the TIA. Employing CCA cables for PoE applications for example, could violate 'construction products regulations' (CPR) and pose a significant risk in terms of fire safety.

It's essential for organisations to prioritise compliance and reliability in their network infrastructure. EXS IT Services prioritises industry standards and exclusively offer solid copper cables, ensuring peace of mind and adherence to regulations. Investing in solid copper cables may entail a higher upfront cost, but guarantees optimal performance and compliance with industry standards, making it the prudent choice for any data cabling installation.