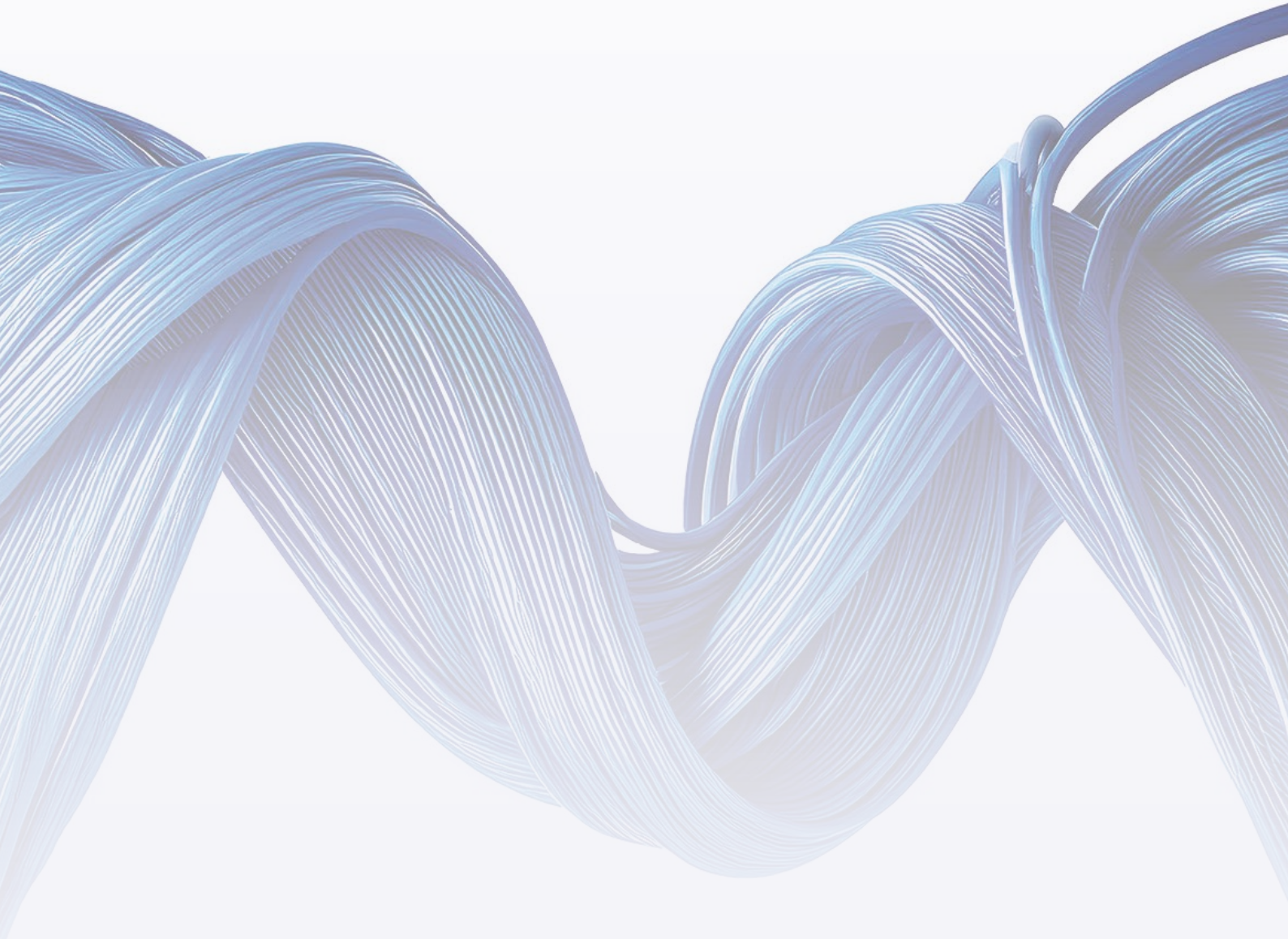


The Complete Guide to Armoured Cables

Your In-Depth Reference for Safe, Compliant,
and Reliable Cable Selection and Installation



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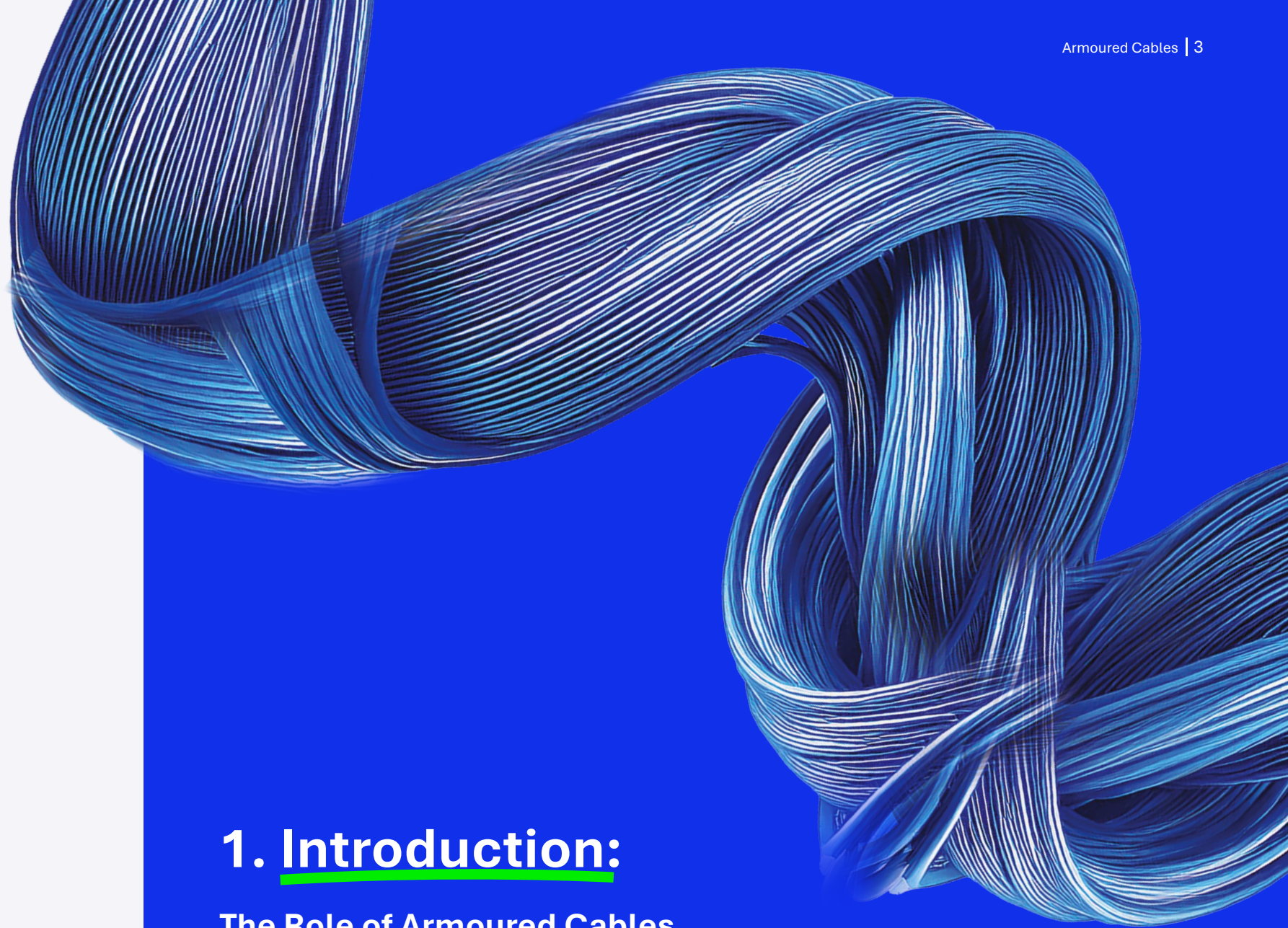
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1. Introduction:

The Role of Armoured Cables in Modern Installations

Armoured cables are the backbone of resilient electrical networks. Designed for enhanced mechanical strength and environmental resistance, they are trusted by engineers, contractors, and project managers across sectors to protect vital electrical circuits against impact, fire, rodent attack, and harsh weather. As energy networks become smarter and safer, armoured cables provide the assurance of continuous power and safety - whether installed in industrial environments, public buildings, or infrastructure projects.

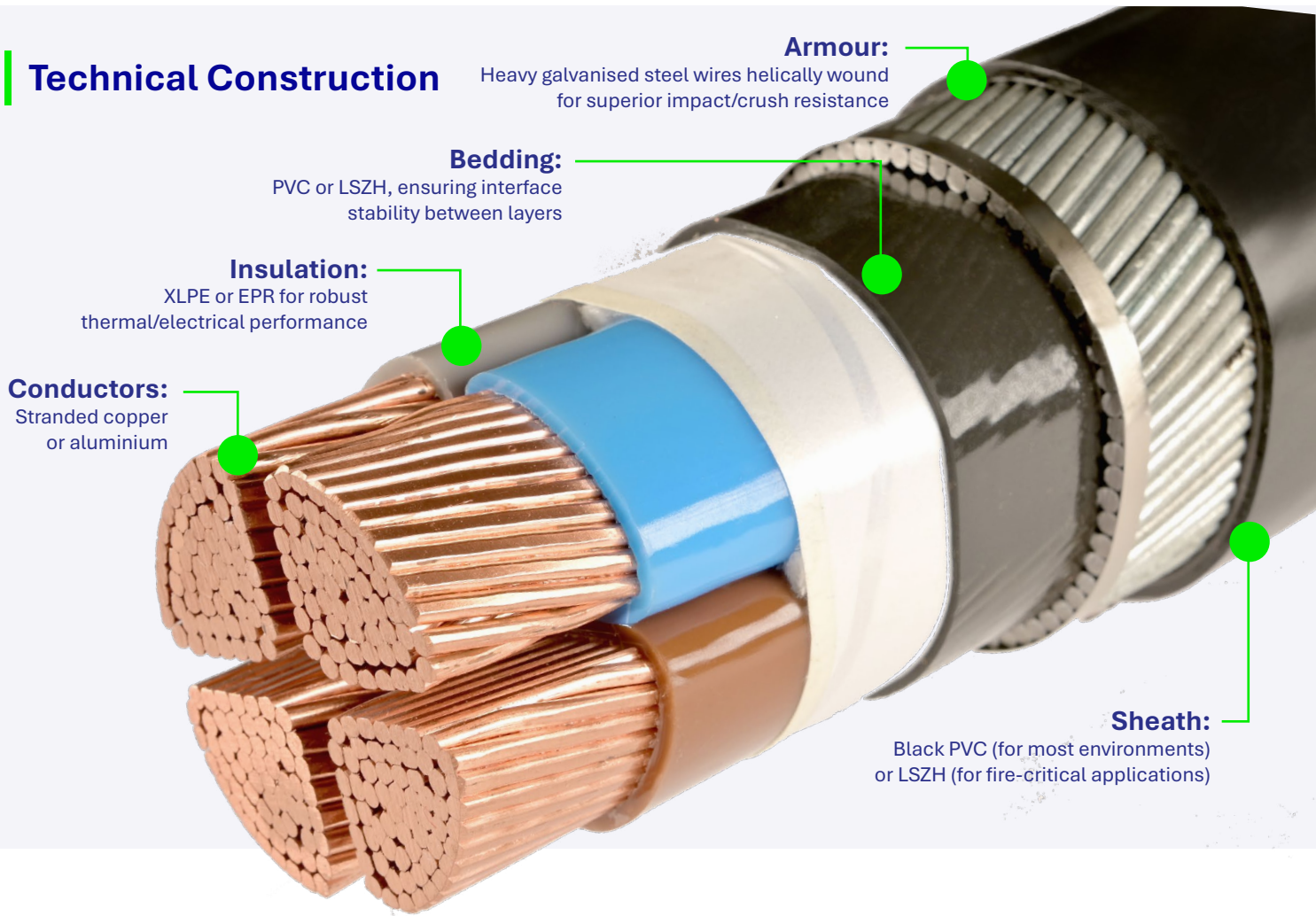
With increasing regulatory scrutiny, sustainability goals and critical reliance on system uptime, choosing the right armoured cable matters more than ever. This resource delivers technical insight and practical guidance on specifying, installing, and maintaining armoured cables for optimal results.

2. Armoured Cable Types: Technical Breakdown

Steel Wire Armoured (SWA) Cables

Ideal For:

Multicore power circuits in high-risk or underground environments



Advantages:

- High mechanical protection - suitable for direct burial and exposed locations
- Can be used as a Circuit Protective Conductor (CPC)
- Compliant with BS5467 (PVC) and BS6724 (LSZH)

Engineer's Note:

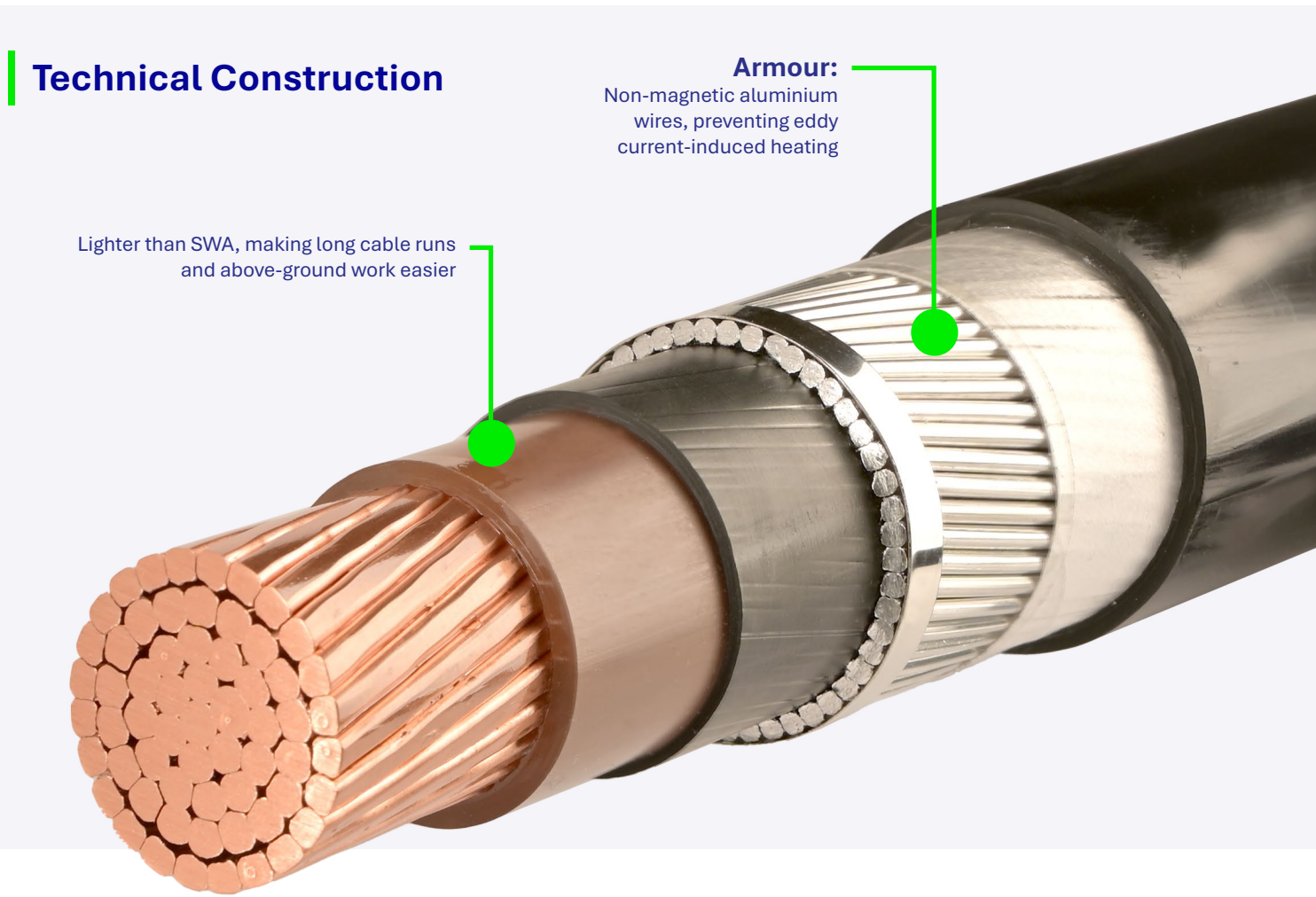
SWA cables significantly reduce the need for extra containment, saving time and cost for large utility or public lighting projects.

2. Armoured Cable Types: Technical Breakdown

Aluminium Wire Armoured (AWA) Cables

Ideal For:

Single-core LV and MV installations - where electromagnetic effects must be controlled



Advantages:

- No magnetic loss - critical for high-current single-core cables
- Lower weight reduces handling and support requirements
- Fully compliant with BS5467 and BS6724

Engineer's Note:

AWA cables are routinely specified for main feeder routes in switchboards and transformer outputs where maximum ampacity and temperature limits are paramount.

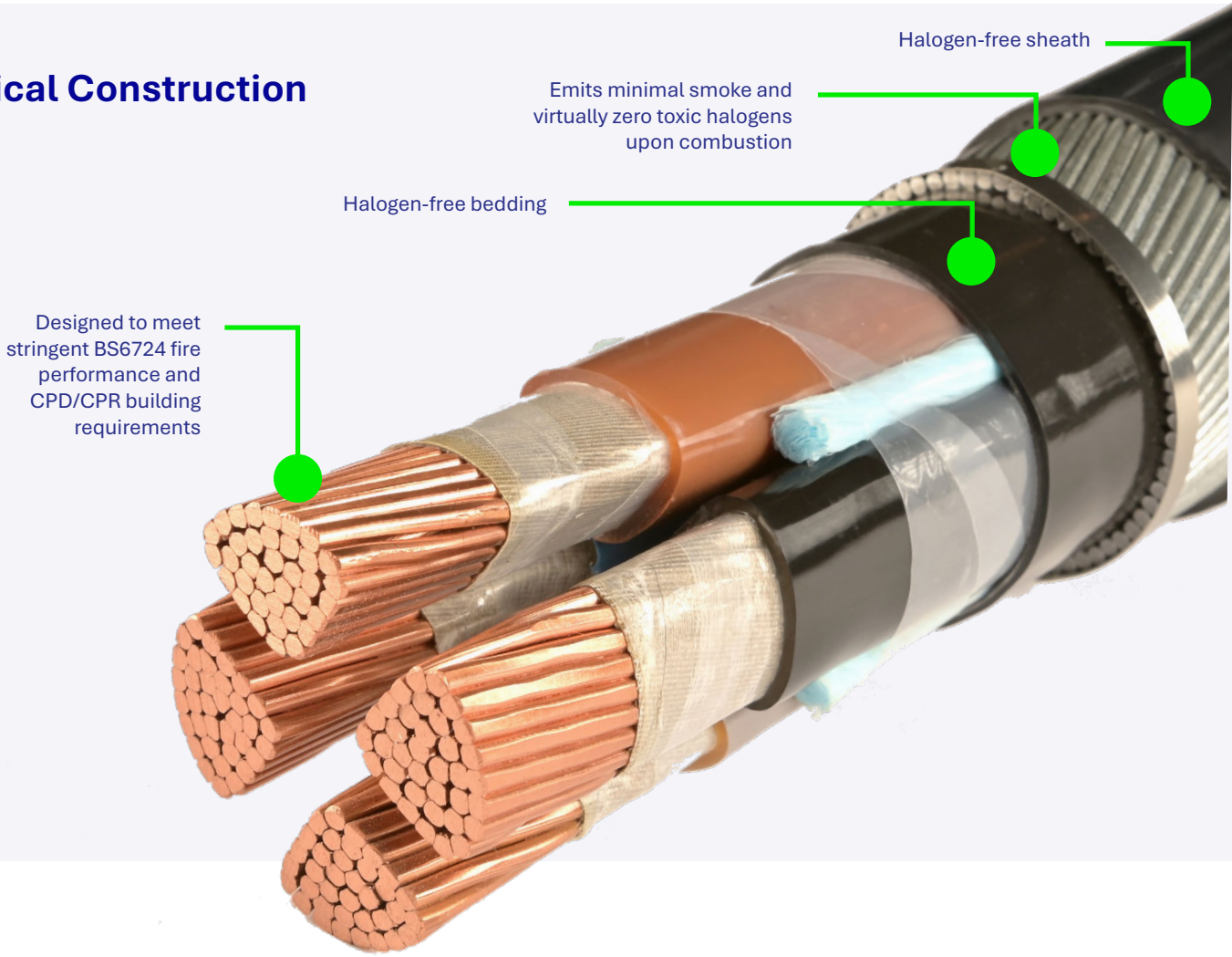
2. Armoured Cable Types: Technical Breakdown

Low Smoke Zero Halogen (LSZH) Armoured Cables

Ideal For:

Fire safety-critical environments - stations, tunnels, hospitals, high-occupancy buildings

Technical Construction



Advantages:

- Increases personnel and equipment safety in the event of a fire
- Required for compliance in public or confined spaces
- Helps mitigate risk to life and critical assets

Engineer’s Note:

LSZH armoured variants are frequently specified in metro and airport infrastructure, enabling safe evacuation and reduction of post-fire damage to sensitive equipment.

3. Industry Applications:

Where Armoured Cables Excel

Sector	Typical Use Cases	Recommended Cable Type(s)
Utilities & Energy	Grid connections, wind/solar farms, transformer feeds	SWA (multicore), AWA (single-core)
Industrial/Manufacturing	Machinery, control panels, process automation	SWA, AWA, LSZH
Transport & Infrastructure	Railways, tunnels, airports, highways, traffic systems	LSZH SWA, SWA
Commercial/Residential	High-rise risers, HVAC feeds, fire alarm and safety systems	LSZH, SWA

Case Study

Batt Cables, with McAuliffe Site Services Ltd, supplied SWA LSZH multi-core cables (BS6724) to power landmark regeneration projects across London. From major residential schemes to commercial hubs, our solutions deliver safe, reliable power in demanding urban environments.

These developments create thousands of homes, workplaces, and green spaces, showcasing how robust cable infrastructure supports sustainable, community-focused growth.

Contact us to see how we can help you



4. Best Installation Practices

- **Gland Selection**
Use BW (internal) or CW (external) glands for reliable termination and earthing.
- **Earthing/Bonding**
Ensure armouring is bonded at both ends for optimal earth continuity and to fulfil regulations.
- **Supporting/Cleating**
Employ cable cleats at recommended intervals. For vertical runs, ensure mechanical support for the cable's weight and prevent sagging.
- **Environmental Selection**
Use MDPE sheath for UV, ozone, and water exposure; LSZH for interior, fire-sensitive spaces.

Practical Tip:

Pre-plan routes, check obstructions, and avoid sharp bends or abrasions during pulling and positioning.

5. Compliance and Certifications

British & International Standards

- **BS5467/BS6724**
 - Main LV armoured cable standards (multicore and single-core types)
- **BS6622/BS7835**
 - MV cable applications, with extended mechanical and fire performance tests
- **IEC 60502-1 and -2**
 - International references for cable structure and testing

Fire/Health & Safety Regulation

- **CPR Classes (EN 50575)**
 - Fire performance rating from Aca (most stringent) to Fca (least stringent) for building installations
 - LSZH types strongly recommended for Cca and Dca classes in sensitive or public buildings
- **Additional Testing**
 - BS EN 60754-1/2, BS EN 61034, BS EN 60332
 - BS6387 and BS8434-2 for critical circuit integrity during fire scenarios

Specifiers' Note:

Certification is your assurance of code compliance - always request full documentation on performance, CPR classification, and material safety datasheets.

6. Why Batt Cables?

Batt Cables is trusted by engineering professionals for:

- **Technical Depth**
Detailed product data, bespoke solutions, and advisory support for complex specifications
- **Global Logistics**
Rapid, secure delivery supported by project-dedicated account teams
- **Comprehensive Range**
All major armoured cable types, including SWA, AWA, and LSZH variants across popular and specialist constructions
- **Sustainability & Future-Proofing**
Low-emission and eco-friendly ranges, full traceability, and lifecycle data to support today's green building goals
- **Assured Compliance**
Cables engineered, tested, and delivered to BS, IEC, CPR, and project-specific standards



Testimonial

- “Batt Cables’ responsiveness, technical expertise, and ability to meet tight delivery deadlines ensured the smooth installation. It’s rare to find a supplier so aligned with project demands — they delivered not just materials, but confidence and continuity.”

PowerSystems

Ready for tailored technical support or a quote for your next armoured cable requirement?

Visit battcables.com contact our technical team, and specify with confidence. solutions and building lasting relationships.



The trusted choice.

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