

## **GENERAL PLIABLE FIRE PERFORMANCE CABLE SPECIFICATION**

### **1. Firetuf Easystrip Standard Pliable Multicore Circuit Integrity Cables - 300/500 Volts**

All cables shall be Firetuf Easystrip 300/500V, manufactured by Draka UK Industrial Cables in accordance with BS7629:2003.

The fire performance characteristics of the "Standard" cable shall comply with the requirements of Clause 26.2 d of BS5839-1 : 2002 when tested in accordance with the provisions of BS8434 Part 1 : 2003 and continue to comply with BS6387 categories CWZ as required by BS7629: 2003

The cable shall have an outer sheath of OHLS material compliant with the requirements for LTS 3 in accordance with BS7629. The sheath colour shall be red for fire alarms and white for emergency lighting applications

The pliable cables selected should in addition have adequate reaction to fire properties including compliance with BS EN 50266 in appropriate category, and smoke emission and acid gas emission levels meeting BS7629. In addition when subjected to Reaction to Fire testing, the tested cables shall not exhibit melting and dripping of flammable materials

The pliable cables selected shall have a robust filled construction and not be subject to deformation, kinking or the likelihood of insulation damage when installed in confined locations requiring tight bending or twisting.

Fire integrity, in accordance with clause 26.2 d of BS5839-1 : 2002 will be achieved by the performance of a high technology fire integrity oversheath, screen, and silicon rubber insulation on the cores. Conductors shall be either solid or stranded copper to BS6360.

100% screening will be achieved by using an aluminium polyester laminated tape which will be in constant contact with a tinned earth conductor.

Firetuf cables shall have a twisted core configuration comprising of 10 twists per metre to improve signal transmission characteristics.

The cable shall have been independently tested for data transmission whilst being exposed to tests described in BS8434 Part 1 : 2003.

The manufacturer shall hold LPCB (Loss Prevention Certification Board) approval for the products they manufacture and supply.

The manufacturer shall hold BASEC approval (British Approvals Service for Cables) or the products they manufacture and supply and in addition, be approved by Quality Assurance standard BS EN ISO 9002-2001.

### **2. Glands and Fixings**

In normal conditions of use, entry to fittings should be through a zero halogen low smoke polymeric or type A2 brass gland. These components must be supplied by the same manufacturer as the cable itself.

Where pliable cables are fixed direct to the building fabric, purpose designed coloured (zero halogen low smoke) OHLS coated copper 'P' clips supplied by the same manufacturer as the cable must be used to ensure the fire survival properties of the installation.

The maximum distance between fixings is dependant on the size of the cable and shall not be greater than that specified in the tables below, unless permission is specifically granted by Draka UK Cables:-

**Table One Surface Fixed**

Overall Diameter of Cable (mm)	Maximum Spacing of Fixings	
	Horizontal (mm)	Vertical (mm)
Not exceeding 9mm	300	400
Exceeding 9mm and not exceeding 15mm	350	400
Exceeding 15mm and not exceeding 20mm	400	450
Exceeding 20mm and not exceeding 40mm	400	500

**Table Two Tray Fixed**

Maximum Spacing * depending on installation		
	Horizontal mm	Vertical Mm
Subject to compliance with local regulations	700	900

### **3. Installation Procedure**

The Electrical Contractor shall ensure that his workmen are fully conversant with and are skilled in the installation of pliable cable.

All bends shall be neat and uniform and their radius shall not be less than six times, the cable diameter although with careful handling a radius of 3D may be utilised. Draka have tested Firetuf Easystrip at these bending radii and established that the circuit integrity is maintained.

Fire Alarm cables shall be segregated from other circuits in separate conduits or separate compartment of trunking to avoid mechanical damage.

Cables should be installed without external joints wherever practicable. All terminations and other accessories should be such as to minimize the probability of early failure in the event of a fire. Terminals used to joint cables should be constructed of materials that will withstand a similar temperature and duration to that of the cable (Clause 26.2 g BS5839-1:2002). Draka will advise on suitable jointing techniques to comply with this requirement.

Pliable cables shall be installed and tested according to BS7671 (IEE Regulations) and in conjunction with the manufacturers recommendations.