ERVITAL FIRE SAFE CABLE

FLAME RETARDANT CHARACTERISTIC / LOW SMOKE EMISSION / WITHOUT POISONED AND CORROSIVE GASES / CIRCUIT INTEGRITY 180 MINUTES / CIRCUIT INTEGRITY WITH SHOCK PH120 / CWZ ACCORDING TO BS STANDARDS

CONSTRUCTION						
Conductor		EN 60228 Class 1 (RE) & 2 (RM) Electrolytic Copper				
Insulation		EN 50363-1 EI2 Cross-linked Ceramic Forming Polymer Compound				
Colour Codde	**2 Cores**	Brown	Blue	Brown	Brown	
	3 Cores	Brown	Black	Grey		
	4 Cores	Blue	Brown	Black	Grey	
Stranding		Cores shall be laid up using the sequence of colours specified				
Wrapping		Pes Tape				
Screen		Al-Pes Tape + Tinned Copper Drain Wire (min. 0,5 mm²)				
Sheath		EN 50290-2-27 HFFR Compound				
Sheath Colour		RAL 3000 Red Other applicable colors: RAL 2003 Orange, RAL 9005 Black, RAL 9010 White				

TECHNICAL CHARACTERISTICS	
Operating Voltage	300/500 V
Min. Bending Radius	6x Cable Ø

TEST VOLTAGE	
Core / Core	2000 V
Core / Screen	2000 V
Temperature Range	- 30 °C - +70 °C (Temp. for stationary condition) - 5 °C - +50 °C (Temp. for moving condition) +90 °C (Max.Permissible Operating Temperature at Conductor) Permissible short-circuit temperature 250 °C

FIRE PERFORMANCE TESTS	
Flame Retardant Test	EN 60332-1-2
Flame Propagation Test	EN IEC 60332-3-24 Cat.C
Smoke Density Test	EN 61034-2
Test on Corrosiveness Combustion Gases	EN 60754-2
Halogen Free Test	EN 60754-1
Circuit Integrity Test (FE180)	IEC 60331-21
Circuit Integrity with Shock Test (PH120)	EN 50200
Circuit Integrity Test (CWZ)	BS 6387

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ERVITAL
FIRE SAFE CABLE

ERVITAL FIRE SAFE CABLE
FIRE RESISTANT CABLES

Fire Safe Solutions For The Best Quality

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ERVITAL
FIRE SAFE CABLE

Increasing population in the world, developing technologies and industrialization sourced general public use trade centers, high buildings, hotels, schools, hospitals, subways bring the risk of fire and pecuniary & non-pecuniary costs along with.

The first way of preventing and minimizing the loss of life and property costs, passes by eliminating or reducing facts that can cause fires. It shouldn't be forgotten that the golden rule of fire protection is preventing fire eruption rather than extinguishing it.

The reaction and resistance to fire characteristics of the materials which are used in cables in construction products and the one that is basic of electrical systems, came into prominence. Cables should keep operating at possible fire moment, providing continuity and minimizing the emission of harmful, poisonous gases which negatively aect human health as much as possible, producing the reaction and resistance to fire class with high-grade materials which become even more important for the safety of life and property. For this reason choosing the right cable is essential.

Ervital Fire Safe Cables have been designed as user-friendly and high-performance cables which is fire resistant, halogen-free, flame retardant, low smoke and certified by LPCB.

We are using the latest technology, materials and equipments to meet requirements of standards.

Ervital Fire Safe Cables are used as a power and control cables:

- In emergency lighting,
- In fire detection,
- In fire alarm system circuits,
- In places where human life and valuable materials and equipment need to be protected.

Ervital Fire Safe Cables should be installed in accordance with last edition of BS7671 or any other appropriate national regulations. It is suitable for indoor and outdoor installation in suitably protected environments and particularly appropriate for surface wiring, direct burial in plaster, tray.

ERVITAL
FIRE SAFE CABLE

FIRE RESISTANT

BS 6387 Cat. CWZ:
Cat. C:
Cat. C subjects the cable under test to a flame via direct impingement corresponding to a temperature attack of 950 °C ±40 °C.

Cat. W:
Cat. W subjects the cable under test to a flame via direct impingement corresponding to a temperature attack of 650 °C ±40 °C with direct application of water simulating a sprinkler system.

Cat. Z:
Cat. Z subjects the cable under test to a flame via direct impingement corresponding to a temperature attack of 950 °C ±40 °C with indirect application of mechanical shock.

BS EN 50200 (Class PH30 - PH60 - PH120):
A single piece of cable is attached to a special fibre glass wall with cable at the minimum bending radius. It is burned with the min. test temperature 830 °C propane burner. The rated tension values of the cable are applied on the conductors during the test. Every five minutes a mechanical shock of 25 kg is applied to the wall the cable is attached to. The tension values must be preserved during the test.

FLAME RETARDANT

BS EN 60332-1-2:
A sample cable of 600 mm will be fixed vertically in a metal chamber with exposed front side. A propane gas burner will be mounted in order to obtain a 45° angle with axis of the sample cable. The test time is dependent on the cable diameter. If the sample does not burn, or if the flame extinguishes itself, the test shall be deemed as successful.

BS EN 60332-3-22 Cat. C:
The test samples are mounted on a steel ladder. The total number of test pieces in the test sample shall be that number required to provide a nominal total volume of non-metallic material of 1,5 l/m of test sample. The steel ladder is placed on the rear part of a test chamber having a with of 1 m, a depth of 2 m and a height of 4 m. The test chamber should be ventilated by an air vent. The test flame is applied on the sample cable for 20 min. The test is passed if the flames extinguish on their own and no part of the samples is damaged over a length of 2,5 m.

ACID GAS EMISSION

BS EN 60754-2:
This test indirectly allows measuring emission of corrosive gas by insulation and sheath compounds. It is possible to measure small quantities of halogens during measurement of the pH-value and the conductivity. In a 500-600 mm long furnace, at least 1g of insulation or sheath compound should be heated up to a temperature o 935 °C. Air flow will ensure that combustion gases pass through a bottle filled with purified water. The test is passed if the pH-values is lower than 4,3 and the electrical conductivity does not exceed 100 S/cm.

SMOKE DENSITY

BS EN 61034-2:
The volume of test chamber is 3x3x3 m^3. The measurement system consists of a light source (a standard 100W halogen lamp) and a selenium or silicon photo-electric cell, both installed at a height of 2,15 m. A rectangular tray will be filled with alcohol. A ventilator is used to ensure the distribution of smoke. The length of the test samples is 1m. The number of test samples depends on the outer diameter. The samples should be attached horizontally above the tray which is filled with alcohol. The ventilator is started and the alcohol is ignited. Light intensity is recorded by a plotter which is connected to the photocell. The test is passed if the level of light transmission does not exceed the values given in the following table during the test.