Firebreak C100 Cable Coating

TECHNICAL DATA SHEET

Firebreak C100 Cable Coating is a durable fire resistant water-borne coating designed for application to conventional cable installations. In the event of a fire it prevents flame spread along both horizontal and vertical cable runs and can also be used to maintain the circuit integrity of critical power and control cables for up to 2 hours.

Description

Firebreak C100 Cable Coating is a water-based coating designed to upgrade the flame spread performance and fire resistance of conventional electrical cabling. It uses the latest water-borne technology to provide a durable coating that is quick and easy to apply to both new and existing cable installations.

It has been fire tested to the requirements of International Electrotechnical Commission (IEC) Standards which are universally recognised when considering various aspects of cable performance.

Fire performance

Test 1:
IEC 60332-3-22: 2000 + A1: 2008

This test is designed to evaluate the flame spread along groups of electrical cables when protected with Firebreak C100 Cable Coating.

The test is conducted in a controlled chamber with the lower part of the cables exposed to a 20kW gas burner for a total period of 40 minutes. Following the flame exposure the cables are monitored to ensure that they self-extinguish within a short period of time.

Following the test the cables are examined to determine the extent of fire damage, the required limit of the test being set at 2.5m above the point of flame impingement.

In the case of Firebreak C100 Cable Coating, the damage was limited to less than half this value using a measured mean dry film thickness of only 0.9mm.

Test 2:
IEC 60331-11-21: 1999

The test is conducted on a high voltage power cable through which a current is applied. The cable is subjected to continuous flame exposure using a minimum flame temperature of 700°C and failure is deemed to occur when damage to the cable is such that circuit failure occurs.

Under these test conditions, the application of Firebreak C100 to achieve a mean dry film thickness of 3.6mm maintained circuit integrity for a period of 121 minutes at which time the test was terminated – 90 minutes being the usual maximum period of flame exposure used in this test.

Coated cables prior to commencement of test

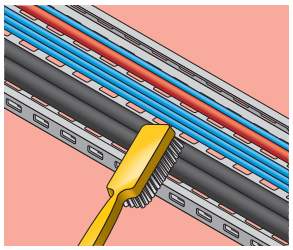
Coated cables exposed to 20kW gas burner during test

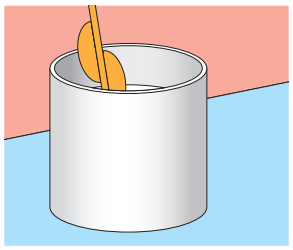
Limited damage to cables after test

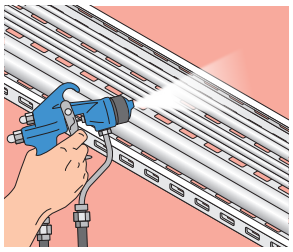
High voltage cable exposed to 700°C flame

Other properties

- Colour: white (other colours available subject to minimum order quantities)
- Specific gravity: 1.40 – 1.46
- Flexibility: ISO1519 (90° bend test using a 20mm diameter mandrel) no cracking or loss of adhesion
- Skinning time: 60 to 120 minutes (20°C; 50% RH)
- Through dry (20°C; 50% RH): 1mm DFT – 4 to 5 hours; 2mm DFT – 9 to 9 hours; 3mm DFT – 10 to 12 hours
- Paintability: can be over-painted with most paints (a trial application is recommended)







Installation

- Ensure contact surfaces are clean, dry and dust free
- Apply and dry between 5°C and 40°C with RH <90%
- Ensure that that all contact surface temperatures are a minimum 3°C above dew point and that there is good ventilation
- Mix the coating thoroughly before commencing application
- Airless spray application is recommended (operating fluid pressure: 2500 – 3000psi, tip size: 21 – 25 thou., fan angle: 20° – 30°, hose diameter: 10mm (inner diameter), hose length: 60m maximum
- The coating can also be applied by brush or roller
- Clean tools after use using water

Coverage

Approximately 0.4m^2 per litre at a wet film thickness of 2.5mm will give a dry film thickness of 1.6mm.

With bunched cables on cable ladders or trays spray application is recommended with application also to the ladder/tray including underneath. Because of the nature of the surfaces usage will be of the order of 30% more than that based the theoretical calculated surface area.

End use conditions

Firebreak C100 is suitable for use across a wide temperature range of -10°C to +80°C and in high humidity conditions.

Maintenance

No routine maintenance is required and whilst the cured coating is tough, periodic inspection for possible damage is recommended. Any damage found should be repaired using Firebreak C100 Cable Coating only. Refer to supplier for instructions on repair.

Supply, packaging and usage

Firebreak C100 is can be supplied in 15 or 19 litre pails or 200 litre drums.

Storage

It is recommended to store in dry conditions between 5°C and 35°C.

Shelf life

12 months when stored in unopened containers under recommended storage conditions.

Health and safety

Please refer to safety data sheet before use.

firebreak® Fire Safety by Design

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