

# CHARCOAT fire Passive Protection

## FIRE RATED CABLE PROTECTION

Water Based Intumescent Cable Coating for the fire protection of electrical cables up to 90 minutes under Hydrocarbon Conditions



CHARCOAT CC



# General INFORMATION

CharCoat CC Cable Coating is a water-based Intumescent Latex coating developed for the fire protection of single, grouped or bundled electrical cables.

Originally formulated in the 1980's to prevent spread of flame along the cable surface, CharCoat CC has become the leader in Cable Protection not only withstanding cellulosic fires of 750°C for 90 minutes, but also Hydrocarbon fires (1100°C) on electrical cable(s) for 90 minutes at a very low DFT.

CharCoat CC is a unique acrylic latex emulsion which has excellent resistance to weathering and aging and which remains flexible indefinitely allowing for cable movement and removal. It is suitable for exterior or interior applications. CharCoat CC will also prevent a short circuit within an electrical cable from starting a fire and will help identify the location of such a short circuit by forming an intumescent char at the spot.



# Special FEATURES

- 600-700% typical intumescent expansion after 10 minutes exposure to 870°C
- Fire rates cable(s) up to 90 minutes at 750°C
- Fire rates cable(s) up to 90 minutes at 1100°C
- Water based Intumescent Latex
- Non-Toxic / Non-Hazardous
- Lightweight, thin-film 2 coat application
- Permanent cost effective solution
- Zero maintenance required
- Single component (stir and spray)
- Solvent, mercury and asbestos free
- Highly flexible in cured form
- 100% UV Stable and certified
- Non-Corrosive
- High resistance to chemicals and acids

CharCoat CC forms a protective intumescent char when exposed to flame or to a temperature above 175°C. This char should be removed completely and clean cables should be recoated if intumescence should occur. There is no need to replace cable that has been subjected to fire as CharCoat CC sacrifices itself to save the cable (as long as the cable is functioning).

CharCoat CC is easily applied by brush or spray and it adheres extremely well to cables and tray, allowing for vertical or overhead application. Care should be taken to see that cables are clean and dry before application, particularly that they are free of oil, grease and dirt. CharCoat CC should be applied in 2 coats to ensure complete coverage.



# Technical DATA

For exterior cable applications, CharCoat CC also stops UV degradation of the cable sheath as it is a 100% UV stable coating (tested).

CharCoat CC will last the life time of the cables with applications now over 35 years.

CharCoat CC is typically applied on the following (interior or exterior):

- New and existing electrical cables
- HV and LV cables
- Cable in need of repair



CharCoat CC can also be applied to electrical cables in rooms and areas such as:

- Substations
- Cable Galleries
- Switch Rooms
- Battery Rooms
- Cable Basements
- Transformer Bays / Areas
- Motor Rooms
- Marine applications (ships / rigs)
- Cable Gantries
- Conveyor belts / overlanders



## TRANSPORT / STORAGE

- Transport and store free from frost- preferably at a minimum of +5°C to a maximum of +30°C.
- shelf-life of unopened pails: 18 month from date of manufacture. Unopened pails must be re-sealed.

## PACKAGING

- 5 gallons (22.5kg)
- Plastic pails
- Other sizes on request

## SURFACE PREPARATION

Please refer to the Technical Data Sheet

## APPLICATION

Please refer to the Technical Data Sheet

## DRYING TIME

Please refer to the Technical Data Sheet

## SAFETY AND THE ENVIRONMENT

Please refer to the Technical Data Sheet

<b>PRODUCT</b>	<b>FIRE RATING MINUTES</b>
CharCoat CC	up to 90 minutes (5000 - 8000v)
<b>APPROVALS</b>	<b>DESCRIPTION</b>
FM3971	1.6mm DFT - FM Approved Flame Retardant coating for grouped electrical cables - PASSED - Ampacity - PASSED - Current Carrying Capacity - NON DERATING - PASSED - Salt Water Exposure and immersion - PASSED - Dielectric Strength - PASSED - Flamability Test
IEC 60331-11*	1.6mm DFT - 90 Minute Circuit Integrity test for cables under fire conditions - 750C
IEC 60331-21*	1.6mm DFT - 90 Minute Circuit Integrity test for cables under fire conditions - 750C
IEC 60331-11	1.6mm DFT - 90 Minute Circuit Integrity test for cables under fire conditions - 1100C
IEC 60331-21	1.6mm DFT - 90 Minute Circuit Integrity test for cables under fire conditions - 1100C
IEEE-383	1.6mm DFT - Flame propagation test
ASTM E 84	1.6mm DFT - 15
ASTM E 162	1.6mm DFT - 16
ASTM D4256-83	1.6mm DFT - Radioactivity Decontamination Factor - 5.83 after 10 weeks cure time
LEED	Meets requirements for LEED credit 4.1 - 29.95g/L
ASTM D2565	Accelerated UV Stability Test (ASTM G155) - 100% UV Stable - Solar Light Co. Inc.
*Cable	IEC 60331-11/21 - tested to 5000V and 8000V HV Power Cable

# **CHARCOAT**

## **PASSIVE FIRE PROTECTION**

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### **Partners:**

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Disclaimer: The above data, particularly the recommendations for the application and use of Charcoat Passive Fire Protection products are based on the manufacturer's knowledge and experience. Due to different materials and conditions of application, which are beyond our control, we recommend in any case to carry out sufficient tests in order to ensure that Charcoat Passive Fire Protection products are suitable for the intended purpose and applications. Therefore, any liability for such recommendations or any oral advice is expressly excluded unless we have acted willfully or by gross negligence. It is always the responsibility of the installer / purchaser to guarantee correct preparation, DFT (Charcoat Coatings) and thickness (charcoat Firestop Products) of all Charcoat Passive Fire Protection products. Charcoat Passive Fire Protection is not liable for installation or faulty installation. It is always the responsibility of the installer / purchaser to guarantee and certify the installation of materials.

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