



**INDIA'S FIRST & ONLY  
PASSIVE FIRE PROTECTION TO PREVENT  
PRODUCTION SHUTDOWNS**

# **FIRE** CAN TAKE PLACE ANYTIME- ANYWHERE



# FIRE HAPPENS FOR A FEW HOURS - BUSINESS INTERRUPTION TAKES PLACE FOR MONTHS

- ★ Installed Active fire suppression systems can extinguish fires..,,, cannot save panels and cables from fire damage.
- ★ Post fire damage panels and cables will 100% need replacement ... this will lead to major production shutdowns .... business interruption ... **loss of market share ... may even lead to business closure .**


# CBRI – TEST OBSERVATIONS

Details of the Specimen		
<b>UNCOATED POWER CABLE 4 CORE GRADE XLPE ATR 70SQMM</b> Cable Diameter: 32 mm armored; 3.5 core. Cable Length: 1.2 m.	<b>UNCOATED POWER CABLE 4 CORE GRADE XLPE ATR FR-LSH 70 SQMM</b> Cable Diameter: 32 mm armored; 3.5 core. Cable Length: 1.2 m.	<b>FIREX EC-43 COATED POWER CABLE 4 CORE, GRADE XLPE ATR 70 SQMM</b> Cable Diameter: 32 mm armored; 3.5 core. Cable Length: 1.2 m. Coated cable diameter: 35 mm. Cable coating Name: FIREX EC-43. Coating Thickness: 1.5 mm.
<b>Result: The cable with the coating withstood both voltage and fire application without any rupture of fuse for 6 min continuous voltage and flame application only.</b>	<b>Result: The cable with the coating withstood both voltage and fire application without any rupture of fuse for 7 min continuous voltage and flame application only.</b>	<b>Result: The cable with FIREX EC-43 intumescent cable coating withstood both voltage and fire application without any rupture of fuse for 240 min (as per customer request) continuous voltage and flame application and 15 min continuous voltage application.</b>

**Recommended performance evaluation requirements:** The cable/cable with coating should withstand both voltage and fire application without any rupture of fuse for 90 min continuous voltage and flame application and 15 min continuous voltage application.

  
**(Mr. RAKESH KUMAR)**  
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(Disclaimer: All procedural, legal, commercial and operational matters will be the responsibility of the sponsor only. The CSIR-Central Building Research Institute, Roorkee is in no way responsible for any of these.)

  
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# TODAY's SITUATION

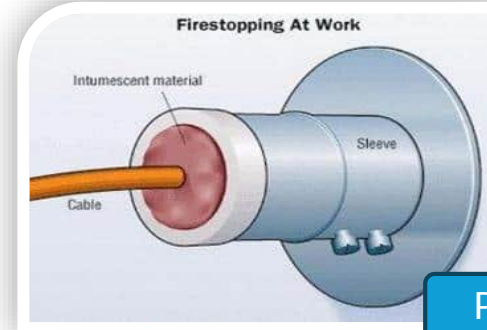
- ★ Panels are unprotected against fires.. = **Panel failures.**
- ★ **Cables** including XLPE - FRLS can withstand fire only for 6-7 minutes ....thereafter circuit failure .... **post fire cables will 100% need replacement .**
- ★ **Cable Openings** in walls and floors are unsealed against fire = **Uncontrolled fire spreading.**



# STANVAC OFFER'S

Only Stanvac offers full protection for :

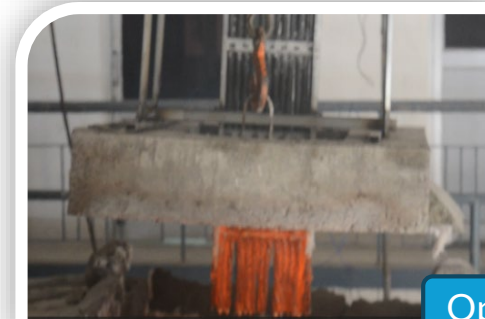
- ★ **Panels** - Gap sealing and Paint overcoating - **1st time in India.**
- ★ **Cables** - Circuit protection - No internal fire damage - 240 minutes IEC 60331-21 – **1st time in the World.**
- ★ **Openings** - Hybrid mortar and Mineral wool firestop barrier - **1st time in India.**



Panels



Cables



Openings



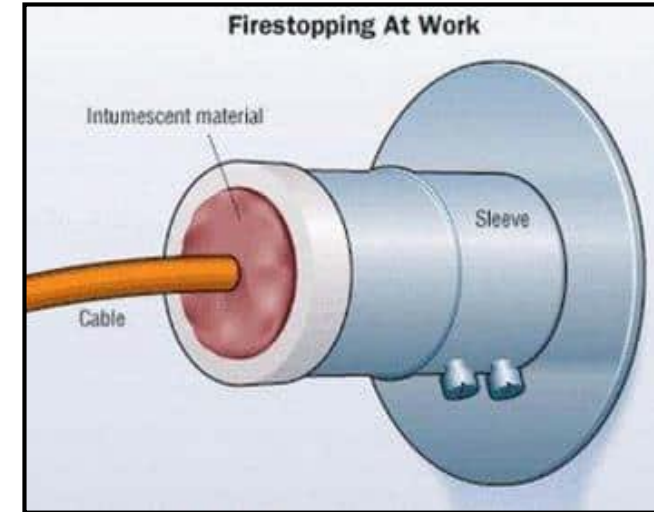
# IMMEDIATE IMPLEMENTATION IS NEEDED... ACTIVE FIRE SYSTEMS CANNOT PREVENT PANEL AND CABLE FIRE DAMAGE.. FIRE MAY HAPPEN AT ANY TIME – ANY WHERE

- ★ Critical production Machinery
- ★ Safety equipment ( Power back up, gas, ventilation, pumps, valves.. )
- ★ Emergency services ( Fire, HVAC, lighting, .. )
- ★ Server Rooms and Data centers
- ★ Control rooms
- ★ Power supply centers
- ★ Warehouses

# FIREX FBS-73 – PANEL FIRE SAFETY

- Unique Flexible Intumescent Fire Sealant putty stick suitable for small gaps, cavities and cable entries, especially for process /shop floor panels, surrounded by people, combustible materials.
- Provide up to 2hrs Fire protection, meets the requirements of IS-12458/BS 476-Part 7.
- Easy to install and provide ease for new cable retrofitting.
- Seals and restricts smoke and fire travel out from within the panels, prevents entry of dust, moisture., insects, rodents etc into panels.

**Stops Oxygen Entry in Panels = sparks and short circuits will not become large fires - apply & seal all gaps .. Will stop fire & smoke... Will also prevent entry of dust, moisture, insects....**





# FIREX DC 52 – PANEL FIRE SAFETY

- Fire Suppression Coating for Electrical Panels.
- Electrical Panels are the heart of any facilities power distribution. Unfortunately they are also one of most common sources of fire.
- Firex DC 52 Fire suppression Coating for electrical panels can reduce these risks by extinguishing flames at their source. It avoids escalation, reduces damage, protects key infrastructure, minimizes business disruptions, and ensures safety
- Will not allow paint to fuel fires.
- BS476 –Part-7 Class 1. (Surface Spread of Flame).
- BS 476 Part 6 (Fire Propagation Index).
- BS 476 Part 5 (Ignitability ).
- ASTM E 662 (Specific Optical Density).
- Also meets requirements of NFPA-255 Class A, UBC Class1, with a flame spread index of 15 & smoke developed value of 10.



**Electrical Panels are at Ground Level .. Human & Plant Safety is Highly Compromised when they burn - apply inside Panel Doors, Panel Rear, Panel Cable Entry & Exits..... especially on process area panels that are on the shop floors in everyday close human proximity, as well as on all combustible painted surfaces.**



# FIREX EC-43 – INTUMESCENT CABLE FIRE PROTECTION COATING

- India's First Intumescent Cable coating that provide 360° Degree Fire protection at 1.6mm minimal thickness (No cable derating).
- Unique Cable Fire Stop Solution for all type of Electrical and Instrumentation Cables. Eliminates the possibilities of Fire accidents mainly caused by Electrical Short circuiting, Uncontrolled fire propagation, Toxic smoke generation, Failure of emergency & safety equipment's & Production stoppages caused by fire damaged cables...
- **1<sup>st</sup> & only cable coating in the world** that provides :
  - a) **240 min plus Fire Survivability**, meets the requirement of IEC-60331-21 for all critical cables – cables of emergency services, critical production machinery, safety equipment...
  - b) **240 min Surface Flame Propagation resistance**, IEC-60332-3 for all general cables.
  - c) **FM 3971.... All at 1.6mm DFT.** (No cable derating)



**Prevents expensive production stoppages, failure of emergency services & catastrophic accidents due to fire. Provides Max Time to Control Fires, Prevent Smoke Caused Human Deaths, Evacuate People ...**

## CABLE PROTECTION - IEC 60331 TESTING - 750 C CONTINUOUS FIRE + 15 MIN COOLING XLPE CABLES VS XLPE CABLES COATED WITH EC 43 SURVIVAL KIT

- |  |   |         |
|--|---|---------|
| 1. XLPE ATR 4 CORE 70 sqmm                                   | : | 6 Min   |
| 2. XLPE ATR FR-LS 4 CORE 70 sqmm                             | : | 7 Min   |
| 3. XLPE ATR 4 CORE 70 sqmm - COATED 1.6MM EC 43 SURVIVAL KIT | : | 240 Min |

# FIREX FM-71 + FIREX FB 250 HYBRID COMBO FIRESTOP BARRIER

- India's First Hybrid Fire stop barrier.
- India's first Universal firestop barrier system for both wall and floor openings – sealing cum load bearing.
- A unique Combination of Ultra light weight Mineral wool and high strength Mortar based fire stop barrier.
- Provide 2 hrs Fire rating, meets the requirements of IS 12458/ ASTM 814/ UL 1479.
- Tested at CSIR-CBRI Roorkee.
- Fire rating further be enhanced by applying 4 hrs Rated Firex EC-43.



**Advantages of both Mortar & Mineral Wool Based Firestop Barriers**



- Inorganic Pourable/ castable **CBRI developed firestop mortar is amongst the most advanced firestop mortar's today available in the world and not just in India.**
- Provide 2hrs fire rating as per IS 12458.
- Also Meets the requirements of ASTM E 814/ UL-1479.
- Provide 2 hrs Fire rating at 75mm thickness Light weight make this universal acceptable for all kind of building structures – easier retrofitting, faster installation...
- Tested at CSIR-CBRI Roorkee
- Fire rating further be enhanced by applying 4 hrs Rated Firex EC-43.



# FIREX EC 7034 – AEROSOL SPRAY FIRE SUPPRESSANT

- India's first cable fire suppression coating in Aerosol spray form to pass IEC 60332-3-21,
- Category A F/R, vertical fire propagation on multiple cables  
**FLAME RETARDANCE – 30 Minutes.**
- A unique solution for Electrical panels inside fire protection - easy application.
- Saves the Heart of the Electrical supply mechanism.
- Being Translucent film, Provides Ease of visibility of colour coding of wirings.



# SUMMARY

## A FEW HOURS OF FIRE - MONTHS OF BUSINESS DISRUPTION

- ★ Replacement of Fire damaged Panels and Cables leads to months of Business disruption, stoppage of supplies, unrecoverable and catastrophic business losses.
- ★ Cost of fires in Panels and Cables:-
  1. Business disruption costs
  2. Property damage costs
  3. Loss of inventories and data
  4. Panel and cable replacement costs
  5. Human injury - legal liabilities
  6. Higher insurance costs
  7. Regulatory compliance and fines - loss of reputation.

**“ FIRE CAN HAPPEN ANYTIME – ANYWHERE ”**