

## Electrical Passive Fire Protection for Hotels

Substations · Guest-Floor Risers · Kitchens & Laundry · Banquet Halls · Safety-Critical Circuits

### Section A | Electrical Zone-Wise Fire Risk Map

#### A1. Substations, MCC Rooms & Cable Galleries

*Sleeping-occupancy buildings (highest scrutiny under NBC). Coverage spans the substation, DG and UPS rooms, boiler / HVAC plant, banquet and restaurant kitchens, laundry MCC, guest-floor electrical risers, banquet halls, underground parking and the fire pump house.*

Area	Fire Scenario	Stanvac PFP Product Application	Rating / Priority
Main substation	Transformer + cable fire	Cable coatings, firestops, panel FP	Critical
DG room (multiple sets)	Diesel pool fire	Cable coatings, firestops, panel FP	Critical
UPS room	Battery thermal event	Cable coatings, firestops, panel FP, FR doors	Critical
Boiler / HVAC plant room	Fuel + lubricant fire	Cable coatings, panel FP	Critical
Banquet kitchen MCC	Cooking oil + LPG fire	Panel FP, cable coatings, firestops	Critical
Restaurant kitchen MCC	Cooking oil + LPG fire	Panel FP, cable coatings, firestops	Critical
Laundry MCC	Lint + dryer fire	Panel FP, cable coatings, firestops	Critical
Guest-floor electrical riser	Vertical fire propagation	Cable coatings + firestops at every floor	Critical
Banquet hall electrical	Decorative + AV fire load	Cable coatings, panel FP	High
Server / PMS room	Cable + server fire	Cable coatings, firestops, panel FP	Critical
Lift machine rooms	Drive + cable fire	Cable coatings, firestops, panel FP	High
Underground parking MCC	Vehicle fire + smoke build-up	Cable coatings, fire-survival cabling for jet fans	Critical
Spa / pool plant MCC	Chlorine + electrical	Panel FP (corrosion-resistant), cable coatings	High
Fire water pump house electrical	Must survive the fire	Structural intumescent, fire-survival cable	Non-negotiable

#### A2. Safety-Critical Electrical Systems

Area	Fire Scenario	Stanvac PFP Product Application	Rating / Priority
Fire water pump house	Must survive the fire it fights	Fireproofed structure, FR cables	Non-negotiable
Stairwell pressurization fan power	NBC-mandated for sleeping occupancy	Fire-survival cable	Non-negotiable

Area	Fire Scenario	Stanvac PFP Product Application	Rating / Priority
Corridor smoke extract fan power	Guest-floor smoke clearance	Fire-survival cable	Non-negotiable
Lift homing circuit	Fire-floor recall	Fire-survival cable	Non-negotiable
PA / Voice evacuation system	Guest announcement (NBC mandatory)	Fire-survival cable, panel FP	Non-negotiable
Sprinkler pump power	Switchgear to motor	Fire-survival cable	Non-negotiable
Kitchen hood suppression release	Hood detector to wet-chemical release	Fire-survival cable	Critical
Emergency lighting + exit signage	Guest-floor egress	Fire-survival cable	Critical
Underground parking jet-fan power	Smoke clearance from car-park fires	Fire-survival cable	Critical
Emergency DG start & transfer	Battery to engine panel	Fire-survival cable	Critical

## Section B | Product-to-Application Matrix

This section maps each of the four priority Stanvac product lines to the specific hotels locations and circuits where they must be specified. Use these tables to build the bill of quantities (BOQ) for any hotels opportunity.

### B1. Cable Coatings — Fire Propagation Prevention

*Minimum 240 minutes protection, thickness ≤ 1.6 mm DFT.*

Purpose: prevent the spread of fire along cable trays, risers and bunches. The “Browns Ferry” scenario — one cable igniting an entire cable gallery — is the design basis.

**Applicable standards: IEC 60332-3 (FM 3971 has limited use — it provides only short-duration protection against arcs and sparks)**

Zone	Specific Application	Priority
Substation and DG cable galleries	All HT/LT trays + transverse firestops every 30 m	Critical
Guest-floor electrical riser (every floor)	All floor-to-floor power and data	Critical
Banquet and restaurant kitchen cable routes	Hood, oven, refrigeration	Critical
Laundry cable routes	Dryer, washer, ironer	Critical
Banquet hall cable routes	Decorative lighting and AV	High
Server / PMS room cable routes	Power and data	Critical
Underground parking cable routes	Lighting + jet-fan + sprinkler	Critical
Boiler / HVAC plant cable routes	Drive and control	High
Lift machine room cable routes	Drive, brake, signalling	High
DG room cable entries	Start, alternator, control	Critical

## B2. Cable Coatings — Fire Survivability

240-minute circuit integrity, thickness ≤ 1.6 mm DFT.

Purpose: keep the cable electrically functional while burning, so the safety circuit continues to operate through the fire event. Fire-survival coatings are specified where loss of the circuit would defeat the fire-fighting or shutdown system itself.

**Applicable standards: IEC 60331-21 and IS 17505-1**

Circuit Type	Where Applied	Priority
Fire water pump power (electric + diesel)	Switchgear to motor	Non-negotiable
Sprinkler pump power	Switchgear to motor	Non-negotiable
Stairwell pressurization fan power	Switchgear to fan motor	Non-negotiable
Corridor smoke extract fan power	Switchgear to fan motor	Non-negotiable
Underground parking jet-fan power	Switchgear to jet-fan motor	Non-negotiable
Lift homing circuit	Lift control to landing call	Non-negotiable
PA / Voice evacuation system	Amplifier to speaker circuits	Non-negotiable
Kitchen hood suppression release	Detector to suppression actuator	Critical
Emergency lighting + exit signage	Guest-floor egress	Critical
Fire alarm panel feeders	Panel to repeaters and field devices	Critical
Emergency DG start & transfer	Battery to engine panel	Critical

## B3. Electrical Panel Fireproofing

Purpose: protect field control panels, junction boxes, MCC panels and logic cabinets from external fire and internal electrical fire. Stanvac offers three complementary solutions under this product line.

Option	Stanvac Solution	Description & Typical Use
A	Two-hour rated firestop sealant	For sealing cable gland openings, panel cut-outs, conduit entries and small penetrations at the panel boundary. Silicone / acrylic intumescent sealant certified to UL 1479 / IS 12458 at 2-hour rating.
B	Non-combustible intumescent paint	For external coating of panel enclosures, cable glands and junction boxes exposed to radiant heat or hydrocarbon fire. Non-combustible base with intumescent top-coat.
C	Two-hour rated intumescent translucent coating for small-dia. cables (aerosol spray)	Aerosol-delivered translucent intumescent coating for small-diameter instrumentation, control and signal cables entering panels. Clean application in congested panel interiors; 2-hour rated.

## B4. Two-Hour Rated Firestop Barriers

Hybrid combination of mineral wool and firestop mortar.

Purpose: seal every penetration through a fire-rated wall, floor or cable tunnel so compartmentation is maintained. Stanvac's hybrid system combines high-density mineral wool (for bulk void filling and thermal insulation) with firestop mortar (for load-bearing, smoke-tight surface seal). This dual-material approach delivers superior 2-hour rating performance across a wider range of penetration sizes than single-material systems.

**Applicable standards: UL 1479 · ASTM E814 · IS 12458**

Location	Specific Application	Priority
Substation room boundary	Cable, pipe, duct penetrations	Critical
DG room boundary	Fuel and cable penetrations	Critical
UPS room boundary	Cable and HVAC penetrations	Critical
Banquet / restaurant kitchen boundary	Hood ducting, gas, cable	Critical
Laundry boundary walls	Dryer exhaust, cable, gas	Critical
Guest-floor riser shafts (every floor)	Floor-to-floor seal	Critical
Server / PMS room boundary	Cable and HVAC penetrations	Critical
Underground parking compartment walls	Cable, pipe, duct penetrations	Critical
Stairwell and lift shaft penetrations	Cable and pipe penetrations	Critical
Lift machine room boundary	Cable and shaft penetrations	High
Fire water pump house entries	Power and control cable penetrations	Non-negotiable
HVAC duct penetrations through fire walls	Fire dampers + collar seals	Critical

*Detailed product data sheets, certifications, specimen specifications and project BOQ support are available on request.*

**For more information, please connect with us.**