

Fire Damage Statement

The Prysmian Group do not as a rule undertake inspections or assessments of cables that have been affected by a fire. We would therefore not be able to comment on either the installation or the cables involved. Our recommendation would be that any fire performance cable that is involved in a fire should be replaced.

You may wish to consider the following points as part of your assessment of whether your fire performance cable(s) should be replaced. These points could equally be applied to non-fire performance circuits:

- 1) If there is any visible damage to the cables i.e. burnt or charred sheath and or blistering of the surface material, then the cable will be unsuitable for its intended application, and should be replaced.
- 2) If there is no visible damage to the cable but the surrounding equipment or accessories exhibit evidence of heat damage i.e. misshapen plastic fixings, molten conduit etc, then consideration should be given to replacing the cable. This is because the cable has likely been exposed to elevated temperatures that exceed its design parameter temperature (under normal operating conditions).
- 3) The (intense) heat from the fire will likely have propagated along the length of the conductor, raising the temperature of the conductor above its design operating temperature. We are unable to advise what length of cable might have been affected by this rise in temperature, but it should be noted that as copper is a good conductor of heat, so it is likely to be significant.
- 4) There may be significant smoke damage to the surface of the cables, evident as deposited soot and other particulates. If the surface of the cables is wiped clean, but residues remain or surface damage is present, then consideration should be given to replacing the cable, as the properties and performance of the sheath may be compromised. It should be noted that soot residues may contain acidic or halogenated by-products that may also impact the long-term performance of the cable.
- 5) Investigations should also consider whether any PVC cables have been burnt in the immediate vicinity of the fire performance cable. PVC, when burnt will give off hydrochloric acid gas. This gas will react with any moisture in the atmosphere and will settle on adjacent surfaces, including any fire performance cable. This residue on the surface of the fire performance cable(s) may also affect the integrity and therefore fire performance of these critical cables.

We would also point out the hazards associated with handling burnt or partially burnt material. A suitable H&S assessment should be made and include the use of protective clothing always.

You may consider that the cable is cut back to a position where there is no indication of effects of the fire to the conductors, insulation or the outer cable elements. A sample should then be examined by an expert in this area. It is possible that even if the appearance is unaffected that the materials may have over heated and their life expectancy has been reduced. Laboratory tests may be necessary.

In view of this there are bound to be some areas of uncertainty and therefore an assessment should be made by a suitably experienced professional in this area. They will have the skills required to assess whether all or part of the cable system should be replaced immediately or whether other corrective actions are possible instead.