



APPLICATION

Toxfree[®] Plus 331 ZH RZ1-K (AS+) is a fire resistant cable, specially designed to ensure the power supply to emergency circuits in the event of fire. During a fire you need critical circuits to work for life safety (signalling lights, fume extractors, acoustic alarms, water pumps, etc) and a secure plant shutdown. For this reason, its use is highly recommended in public places such as: hospitals, tunnels, offices, production plants, laboratories, hotels, etc.

CONSTRUCTION

Conductor

Electrolytic annealed copper, class 5 (flexible) according to EN 60228 and IEC 60228.

Insulation

Mica tape + Cross-linked polyethylene type DIX-3 according to HD 603.

The standard identification of insulated conductors according to HD 308 is the following:

1 x	Natural
2 x	Blue + Brown
3 G	Blue + Brown + Green/Yellow
3 x	Brown + Black + Grey
3 x + 1 x	Brown + Black + Grey + Blue (reduced cross-section)
4 G	Brown + Black + Grey + Green/Yellow
4 x	Brown + Black + Grey + Blue
5 G	Brown + Black + Grey + Blue + Green/Yellow

Outer sheath

Fireproof polyolefin with low smoke and halogen free fumes under fire conditions.

Orange colour.

CHARACTERISTICS



Electrical performance

Low voltage: 0,6/1 kV.



Thermal performance

Maximum conductor temperature: 90°C.

Maximum short-circuit temperature: 250°C (max. 5 s).

Minimum service temperature: -40°C (fixed and protected installations).

Minimum installation and handling temperature: -0°C



Fire performance

Flame non-propagation according to EN 60332-1 / IEC 60332-1.

Fire non-propagation according to EN 60332-3 / IEC 60332-3 and EN 50399.

Fire resistant (PH120) minimum 120 minutes at 840 °C:

According to IEC 60331-2 / EN 50200 for cable diameter ≤ 20 mm.

According to IEC 60331-1 / EN 50362 for cable diameter > 20 mm.

Fire resistant category C (180 minutes at 950°C), W & Z according to BS 6387.

Reaction to fire CPR: B2_{ca}-s1a,d1,a1 or C_{ca}-s1b,d1,a1 according to EN 50575 (see cross-section).

Low Smoke Halogen Free according to EN 60754-1 / IEC 60754-1.

Low corrosive gases emission according to EN 60754-2 / IEC 60754-2.

Low smoke emission according to EN 61034 / IEC 61034:

Light transmittance > 60%.



Mechanical performance

Minimum bending radius: 5x cable diameter.

Impact resistance: AG2 Medium severity.



Environmental performance

Chemical & Oil resistance: acceptable.

UV Resistant according to EN 50618.

Water resistance: AD5 Jets.



Installation conditions

Open Air.

Buried.

In conduit.

STANDARDS / COMPLIANCE



According to
IEC 60502-1



Standards and approvals
RoHS / CE



CPR (Construction Products Regulation)
B2_{ca}-s1a,d1,a1 (according to cross-section) or
C_{ca}-s1b,d1,a1 (according to cross-section)

