

Low Smoke

Zero Halogen

Flame Retardant

### Why Wait For Disaster To

The wrong low voltage power cable installed in an enclosed area can pose severe risks to personnel and equipment. In the unfortunate event of a fire, some cable insulating materials release halogenated gases and large amounts of smoke which can fatally injure personnel. Additionally, these same toxic gases can be extremely corrosive to sensitive electronic equipment. If disaster strikes, the wrong cable can cost companies millions of dollars in damages, and may even cost lives.

Do your cables fit into this category? Chances are, the answer is YES. Whether you're using PVC, CPE, or CSPE (Hypalon<sup>†</sup>), you may be putting equipment and personnel at risk. Over the past twenty years, Prysmian has initiated a worldwide effort to eliminate this very real hazard to our customers. Our years of research have culminated in new, cost competitive, low smoke non-halogenated materials which can be used as a direct replacement for your current low voltage products. Prysmian's EcoSafe™ cable design utilizes a thermoset, insulating compound called Afumex™. This dual layer, cross-linked polyolefin insulation (EPR-based inner layer and an EVA-based outer layer) system features the following key characteristics:

- 90°C Wet or Dry Operation
- Flame Retardant
- Low Smoke Evolution
- Non-Halogenated Compounds
- Oil Resistant

### Where Is EcoSafe™ Installed?

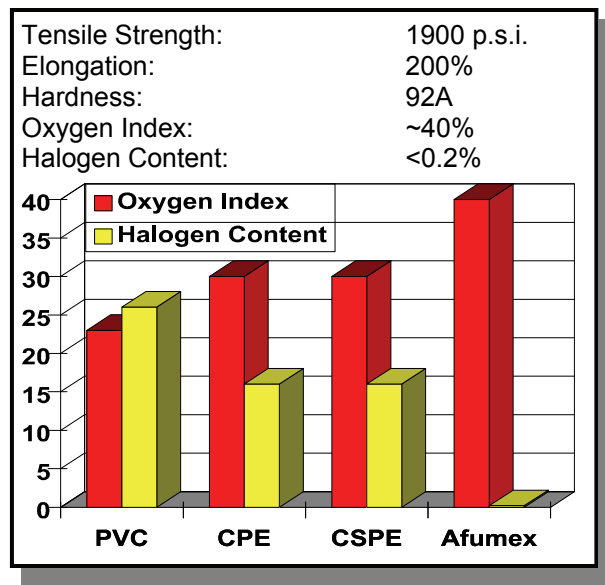
- 600 Volt and 2kV Applications
- Cable Tray and Raceway
- Service Entrance
- Commercial Buildings
- Transit Systems
- Tunnels
- Central Office
- Downtown Networks

### Rated to meet your needs...

- CSA Ratings: RW90
- UL Ratings: Type RHH/RHW-2/USE-2
- Low Smoke (LS)
- Oil Resistant II
- Sunlight Resistant
- CT USE (>1/0 AWG)
- ICEA: S-95-658
- S-105-692

### Consider the Benefits...

Historically, the mechanism by which an insulating material achieved its flame retardant property was a reaction between by-products of the combustion process and halogen elements inherent to the material itself. Prysmian, realizing the harmful results of this reaction, explored new flame retardant materials that did not incorporate the use of halogen compounds, yet still achieved a high Oxygen Index inherently needed for flame retardant cables.

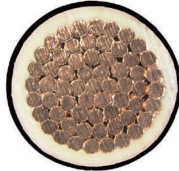


<sup>†</sup>Hypalon is a registered trademark of the DuPont Corporation

# Consider the value...

## Fire Resistance

Cables installed in cable trays have a high exposure to flame in the event of a fire. In such applications, it is imperative to have an insulation system which will not readily allow fire to propagate along its length. Such propagation could lead to costly equipment damage, extensive cable replacement and loss of life. Prysmian's Afumex™ insulation is a dual layer system optimized for flame retardant properties.



Several industry standards have been developed which measure the relative combustibility of insulation systems when subjected to various thermal sources. Prysmian's EcoSafe™ cables are designed to meet some of the industry's most stringent flame tests including:

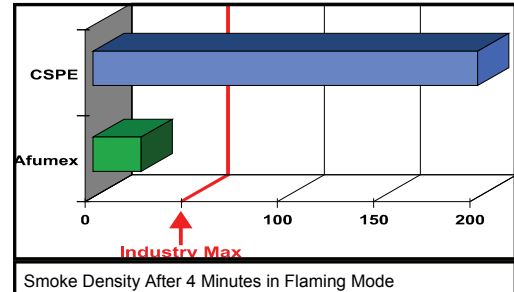
- |           |              |          |
|-----------|--------------|----------|
| IEEE 383  | UL CT-Rating | CSA FT-1 |
| IEEE 1202 | UL VW-1      | CSA FT-4 |
|           | ICEA T29-520 |          |

## Corrosive Gas Emission

When power cables burn, the cost of cable replacement is an obvious concern. However, there are less apparent, but more costly concerns to be considered. Expensive electronic equipment (in areas unaffected by flame) may be severely damaged by corrosive gases. In particular, chlorine, used in many power cable insulating materials, forms an extremely destructive gas when burned. Even some types of structural corrosion have been traced back to large amounts of chlorine and other halogenated gases emitted during building fires. Because Prysmian's EcoSafe™ cables do not contain any halogens, corrosive gases will not be emitted during combustion. Therefore, surrounding equipment and structures will not fall victim to these harmful after-effects of a cable fire.

## Smoke Generation

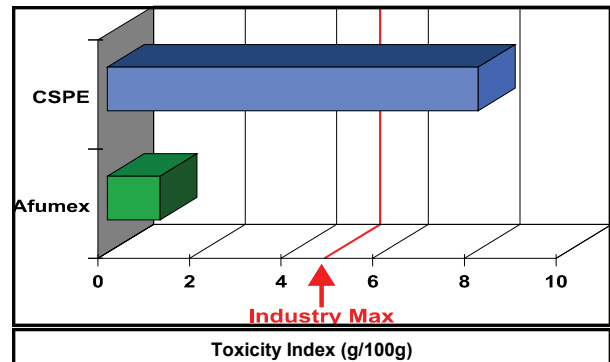
In the event of a fire, personnel safety should be the NUMBER ONE concern. Heavy smoke in enclosed areas is usually the leading cause of injury or death in most building or tunnel fires. It is imperative, therefore, that any potential sources of smoke



generation be eliminated. The industry standard measurement in this regard is the NBS Smoke Chamber test. Prysmian's EcoSafe™ design emits approximately 50% less smoke than the industry recognized 'low smoke' requirement. This easily earns an 'LS' rating in accordance with UL 1685 as well as a 'low smoke' qualification in accordance with ICEA T-33-655.

## Toxic Gas Emission

Just as halogen gases are highly corrosive, they are also highly toxic to personnel. In enclosed areas such as tunnels, vaults, and commercial buildings, it is especially important to protect the public from this hazard. Therefore, choosing a cable system, which contains no halogens, can actually save lives.



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