



# newage<sup>®</sup> SMART

WIRES THAT RESIST FIRE PROPAGATION



Exova



## » Fluorine, Chlorine, Bromine, Iodine

## When Burned

- » Toxic & irritant gases are emitted.
- » Dense black smoke.
- » Create acid when mixed with water.
- » Acid is highly corrosive to metals & most solids.

## HALOGEN FAMILY

The periodic table shows the following elements in the Halogen Family (Group 17):

- Fluorine (F)
- Chlorine (Cl)
- Bromine (Br)
- Iodine (I)
- Astatine (At)

The noble gases (Group 18) are also shown in red:

- Helium (He)
- Neon (Ne)
- Argon (Ar)
- Krypton (Kr)
- Xenon (Xe)
- Rn (Radon)
- Og (Oganesson)

The lanthanide and actinide series are shown at the bottom of the table.

## Low Smoke Zero Halogen Characteristics

- » LSZH is characteristic of a material & not a separate polymer.
- » It doesn't contain halogens.
- » Thermoplastic polymers.
- » Fire retardant.
- » No toxic gases & fumes.
- » Very light & cleaner smoke is created during combustion.
- » High oxygen index.



## Material & Specification

### » FLAME PROPAGATION

» IEC 60332-1, 2 & 3

### » SMOKE EMISSION

» IEC 61034-2, BS 7622, BS 7846

### » ACID GAS EMISSION TEST

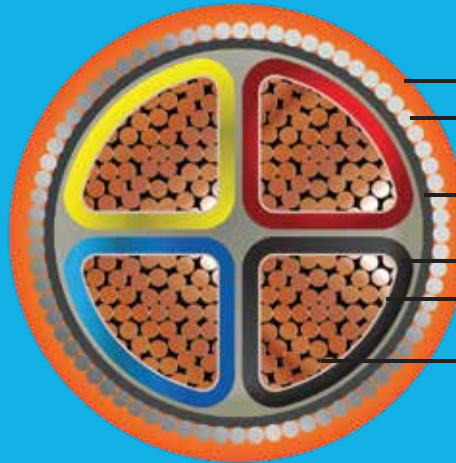
» IEC 60754-1 / 2

### » LIMIT OF OXYGEN INDEX (LOI)

» ASTM-D2863, BS 2863

### » CIRCUIT INTEGRITY

» IEC 60331, BS 6387 C, W & Z



LSZH Sheath

Steel Armour Wire  
(Optional)

LSZH Bedding  
(Optional)

XLPE / LSZH Insulation

Mica Tape  
(Optional)

Copper / Aluminium  
Conductors

## Certification

# 1st & only Certificate of Product Approval in Pakistan

Newage is the first company in Pakistan to achieve BS 6387 Category C, W & Z within the range of LSZH Cables.

Newage fire resistant cables continue to operate under fire conditions upto three hours at temperature of 950°C.

**BEST PROTECTION AGAINST FIRE**  
**(LOI up to 45%)**

[www.redbooklive.com](http://www.redbooklive.com)  
CERTIFICATE NO. 1518a





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PROPAGATION**

**ECO  
Friendly**

- » Smoke is a mixture of heated gasses, liquid droplets & particles released by combustion.
- » Smoke inhalation accounts for the majority of fire related injuries.
- » Smoke can impede eyesight or cause temporary blindness during fire.
- » In the upper atmosphere, chlorine-containing smoke have been implicated in the destruction of the ozone layer

**Green  
Wire**

**Green  
Pakistan**

**LSZH  
CABLES**

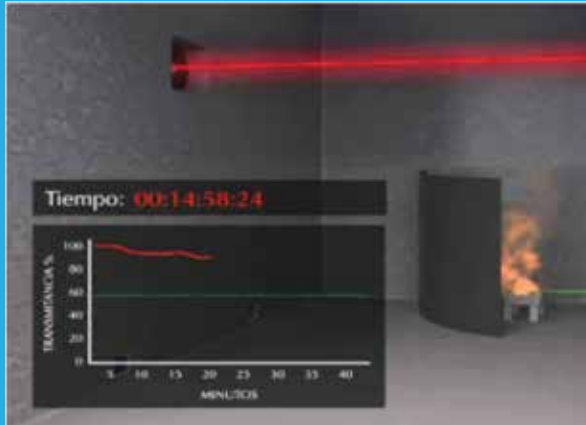


## 3 Meter Cube Smoke Test

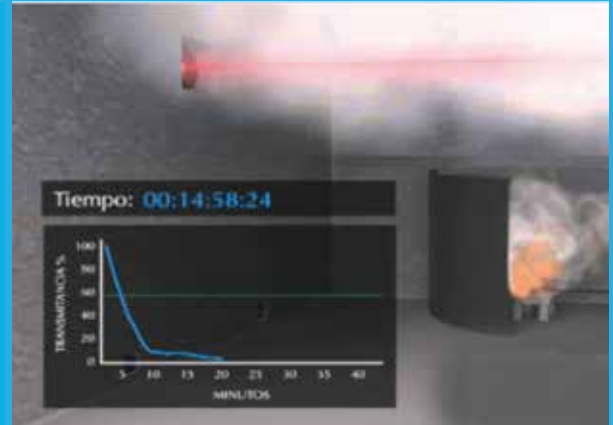


Cable is burned horizontally and light transmittance is measured in a defined cubic chamber at atmospheric pressure to maintain standardization and repeatability of the test. To avoid adding smoke from other sources, the cable sample is burned using an alcohol flame as it has zero smoke emission.

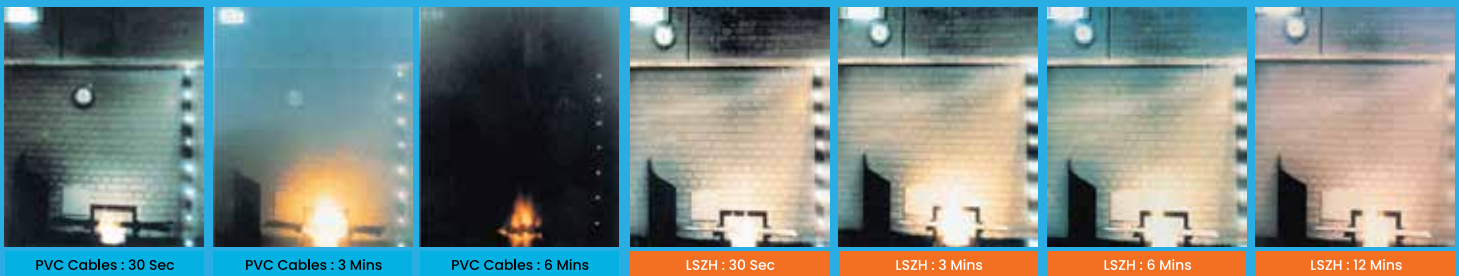
NEWAGE LSZH CABLES



REGULAR PVC CABLES



To evaluate the smoke emitted, a beam of light is shown across the enclosure / chamber & the light received on the far side is measured.



## Limit of Oxygen Index

- » Concentration of oxygen in atmosphere is 21%.
- » Material having LOI less than 21% will burn the subject to ignition by itself.
- » More the oxygen index, more the cable will be retardant against fire.
- » LOI of Newage LSZH material is up to 45%.



## Why Newage Smart?



Newage cables is the pioneer in manufacturing LSZH cables with the following properties:

Superior flame retardancy.

Very light & clearer smoke is created during combustion.

Greatly increases visibility in the event of a fire.

Slow to ignite, burns slowly & gives off reduced smoke & fumes which can kill people.

Does not produce corrosive halogen acid gases which destroy sensitive electronic equipment.

Helps people to escape from a fire - helps them to see & to breathe for longer.

Wins time for people to escape & for emergency services to help.

When tested to BS 6425 & IEC 60754 Part 1 & 2 the acidic gas evolved during combustion is less than 0.5% by weight of material.

When tested in accordance with BS 2863, ASTM-D2863, the oxygen index of both bedding & sheath is up to 45% which is far better rating as mentioned in standard.

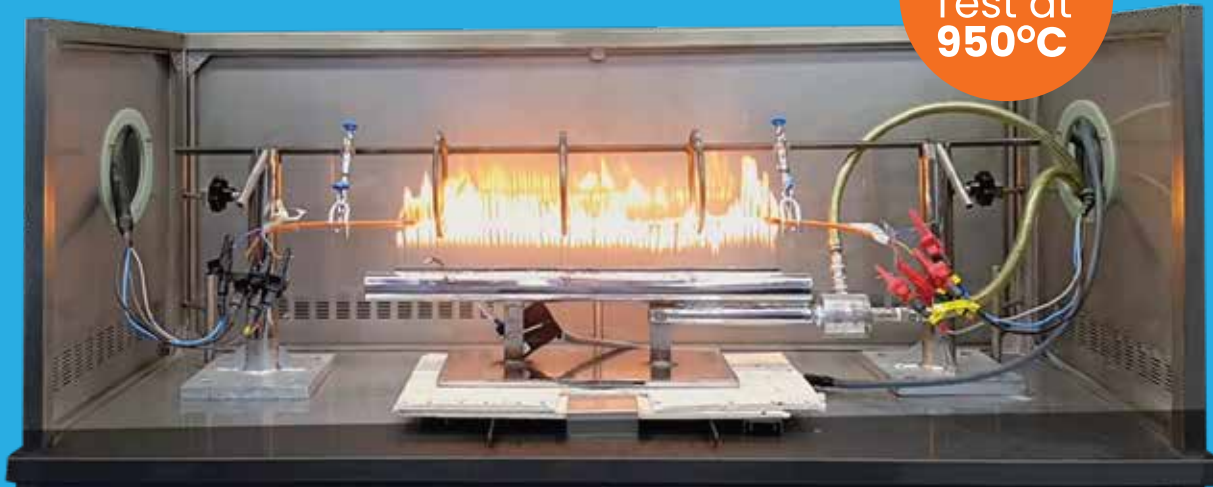
## Fire Resistant Cable Features

Best resistance to fire & its propagation.

Long term circuit integrity during fire.

The duration of survival under fire condition.

Integrity  
Test at  
950°C



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# Application



- » Multi Story Buildings, Office Blocks, Hotels.
- » Educational Establishments, Factories.
- » Cinemas, Theaters, Shopping Complexes.
- » Tunnels, Hospitals, Defense Installations.
- » Power Stations, Nuclear Installations.

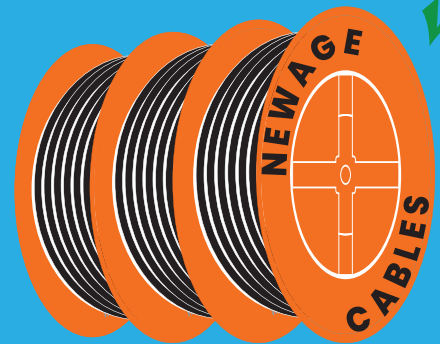
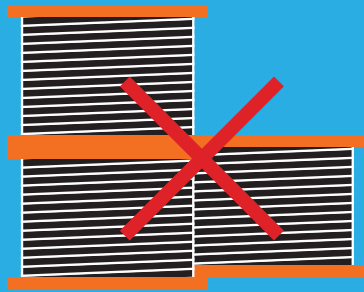


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## Cable Handling

- » Cables should not be exposed to sunlight for considerable period before installation
- » Preferably the installation is done during morning hours when the ambient temp is low
- » Wire/Rope should not be used directly on cable sheath for pulling.
- » When pulled on cable trays or any uneven surface, special attention is needed to weldings/or unusually rough terrains.
- » Rollers and bends should not have any sharpness which may damage sheath.
- » Special LSZH compatible accessories and fixings are recommended for installations requiring enhanced fire performance.



## Contact

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