



JUVAS®

Speed of Life...

FUTURISTIC... LIFETIME WIRES...
PURE COPPER... SURE CONDUCTIVITY...



DURABILITY



SAFETY



QUALITY



FLEXIBILITY



100%
BUNCHING



100%
ANNEALING



FR/HRFR
GRADE INSULATION



100%
ELECTROLYTIC
COPPER



102%
CONDUCTIVITY



IS: 694:1990
CM/L - 8966817

Introduction

UTC Pariwar in the brand name JUVAS Introduces high quality wires and cables for domestic, agriculture, communication and industrial applications. The wire and cable range is manufactured as per the latest national and international standards using best raw materials, state of the art machinery and tools in a modernized plant at Delhi (INDIA).



Electrolytic Grade Copper having 99.99% purity & maximum conductivity to ensure minimum power losses & maximum safety of our Equipments.



Uniformly bunched copper wires of uniform diameter that makes stripping & crimping of wires easier & minimizes losses and thus increases efficiency.



Indigenously developed PVC compound formulated from finest ingredient is produced in house. High thermal stability & insulation resistance makes it suitable for use in Indian environmental conditions.



Double insulation, with insulation from virgin PVC & coated with ultra thin colour layer. This feature enhances safety & ensures proper colour identification of wires & Cables.

HOUSEHOLD

AGRICULTURE

COMMUNICATION

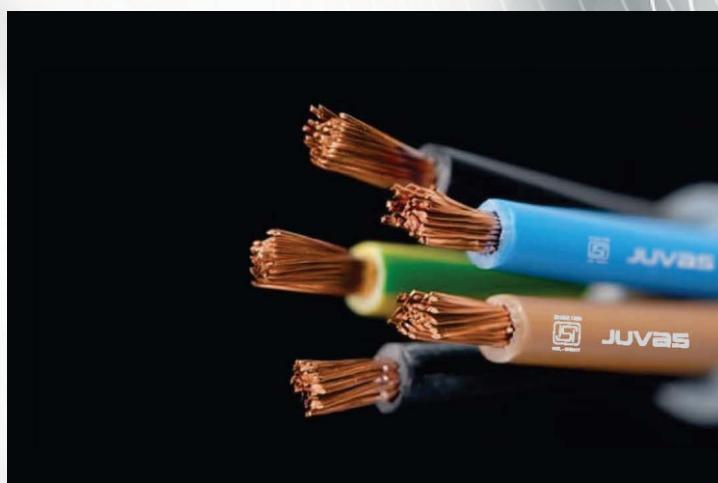
INDUSTRIAL



SINGLE CORE FLAME RETARDANT CABLE (FR)

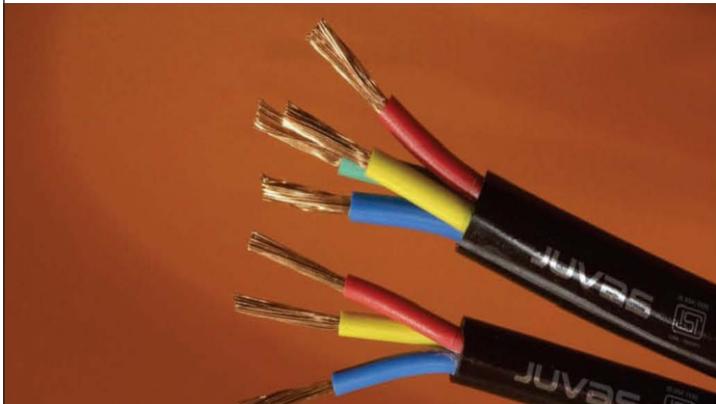
Juvas FR wire is a high quality single core twin insulated unsheathed cable with copper conductor in voltage grade 1100V conforming to IS : 649, ICE 60227 and Bs6004.

The 1100V grade multi strand bright electrolyte annealed copper is bunched together and insulated with a flame retardant (FR) PVC compounded to achieve higher oxygen and temperature index which helps in restricting the spread of fire. In addition, high insulation resistance and dielectric strength helps in delivering safety.



| Nominal Cross Sectional area of conductor | Number/ Nom. Dia. of Cond. strands | Thickness of Insulation (Nom) | Approx Overall Diameter | Current Carrying Capacity 2 Cables Single Phase | | Max. Conductor Resistance Per KM at 200 C |
|---|---|-------------------------------------|-------------------------------|--|--|---|
| | | | | Unenclosed clipped directly to a surface or on cable trays | | |
| Sq.mm | mm | mm | mm | Amps | | Ohms |
| 0.5 | 16/0.2 | 0.6 | 2.2 | 5 | | 39.00 |
| 0.75 | 24/0.2 | 0.7 | 2.5 | 7 | | 26.00 |
| 1.0 | 14/0.3 | 0.7 | 2.8 | 12 | | 18.10 |
| 1.5 | 22/0.3 | 0.7 | 3.1 | 16 | | 12.10 |
| 2.5 | 36/0.3 | 0.8 | 3.8 | 22 | | 7.41 |
| 4.0 | 56/0.3 | 0.8 | 4.4 | 29 | | 4.95 |
| 6.0 | 84/0.3 | 0.8 | 5.0 | 37 | | 3.30 |

* Available in 90 meter lengths in carton packaging and in 180 meters project packaging.



MULTICORE FLEXIBLE WIRE

Juvas Multicore Wire is a high quality multi core PVC insulated & PVC Sheathed cable with copper conductor in voltage grade 1100V conforming IS:694, ICE 60227 & Bs6500.

These Wires are bunched together with flexible copper & Coated with type 'A' PVC insulation. Colour coded, core laid-up and overall sheathed with ST-1 PVC compound for long life and high performance.

| Nominal Area in Sq. mm | No. of Strands/ Nominal Dia | Max. DC resistance Ohm/km at 200c | Nominal Insulation thickness mm | Core dia. mm | Nominal Sheath thickness in mm | | | Nominal Sheath thickness in mm | | | Current Rating |
|------------------------------|--------------------------------------|--|--|--------------------|--------------------------------------|--------|--------|--------------------------------------|--------|--------|-------------------|
| | | | | | 2 core | 3 core | 4 core | 2 core | 3 core | 4 core | |
| 0.50 | 16/0.2 | 39.00 | 0.60 | 2.20 | 0.90 | 0.90 | 0.90 | 6.20 | 6.60 | 7.20 | 4 |
| 0.75 | 24/0.2 | 26.00 | 0.60 | 2.50 | 0.90 | 0.90 | 0.90 | 6.80 | 7.20 | 7.90 | 7 |
| 1.00 | 32/0.2 | 19.50 | 0.60 | 2.60 | 0.90 | 0.90 | 0.90 | 7.00 | 7.50 | 8.10 | 12 |
| 1.50 | 30/0.25 | 13.30 | 0.60 | 2.90 | 0.90 | 0.90 | 1.00 | 7.60 | 8.10 | 9.00 | 16 |
| 2.50 | 50/0.25 | 7.98 | 0.70 | 3.50 | 1.00 | 1.00 | 1.00 | 9.00 | 9.60 | 10.50 | 22 |
| 4.00 | 56/0.3 | 4.95 | 0.80 | 4.80 | 1.00 | 1.00 | 1.00 | 10.60 | 11.30 | 12.40 | 29 |
| 6 | 84/0.3 | 3.30 | 0.80 | 5.10 | 1.15 | 1.15 | 1.15 | 12.60 | 13.40 | 15.20 | 37 |
| 10 | 140/0.3 | 1.91 | 1.00 | 6.60 | 1.40 | 1.40 | 1.40 | 16.00 | 17.00 | 18.80 | 51 |
| 16 | 126/0.4 | 1.21 | 1.00 | 8.00 | 1.40 | 1.40 | 1.40 | 18.80 | 20.10 | 22.10 | 68 |

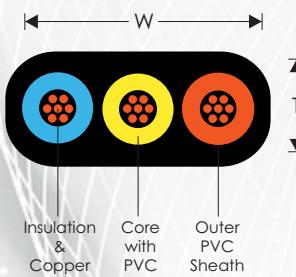
THREE CORE FLAT SUBMERSIBLE CABLE

Three Core Flat Cables consist of 3 insulated cores laid side by side and extruded over it using black sheathing grade PVC. These cables are flat in nature & therefore are called Flat Cables. Cores are not laid up in this type and are parallel to each other. Three core flat cables are ideally suited for heavy duty applications in industries and submersible pumps, in which the sheathing must withstand abrasion and prevent ingress of water inside. The sheathing is made of special grade sheathing PVC which gives the required finish and strength.



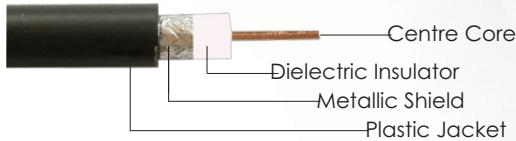
| Nominal Area of Conductor | Number/ Nom Dia. of Wire | Thickness of PVC Insulation (Nom) | PVC Outer Sheath (Nom) | Maximum Resistance Per Km. at 200C | Approx. Overall Dimension (W x T) | Current carrying capacity at 400 C |
|---------------------------|--------------------------|-----------------------------------|------------------------|------------------------------------|-----------------------------------|------------------------------------|
| Sq.mm | mm | mm | mm | Ohms | mm | Amps |
| 1.5 | 22/.3 | 0.8 | 1.2 | 12.10 | 11.9 x 5.5 | 14 |
| 2.5 | 36/.3 | 0.9 | 1.2 | 7.41 | 13.8 x 6.1 | 18 |
| 4.0 | 56/.3 | 1.0 | 1.2 | 4.95 | 15.8 x 6.8 | 26 |
| 6.0 | 84/.3 | 1.0 | 1.2 | 3.30 | 17.3 x 7.3 | 31 |
| 10.0 | 80/.4 | 1.0 | 1.4 | 1.91 | 20.5 x 8.7 | 42 |
| 16.0 | 126/.4 | 1.0 | 1.4 | 1.21 | 23.65 x 9.75 | 57 |
| 25.0 | 196/.4 | 1.2 | 2.0 | 0.78 | 30 x 12.65 | 72 |

* Note: Core Colours - Red, Yellow, Blue. Sheath Colour - Black



CO-AXIAL CABLE

Juvas Co-Axial Cable is made by using specially formulated UV resistant PVC compound. PVC used for outer sheath ensure low attenuation and uniform impedances resulting in better reception due to minimum loss in signal quality.



| CONSTRUCTION PARAMETERS | CABLE TYPE | | |
|--|-----------------------------------|----------------------------------|----------------------------------|
| | RG 11 F | RG 6 F | RG 59 F |
| CENTER CONDUCTOR Nom. Dia. (mm) | Solid bare copper 1.63 | Solid bare copper 1.02 | Solid bare copper 0.80 |
| DIELECTRIC Nom. Dia. (mm) | Foam PE 7.11 | Foam PE 4.57 | Foam PE 3.55 |
| OUTER CONDUCTOR 1st Shield 2nd Shield Min. Coverage | Al-Foil Bonded | Al-Foil Bonded | Al-Foil Bonded |
| Flooding Compound | Al-Alloy Braiding 60 | Al-Alloy Braiding 60 | Al-Alloy Braiding 60 |
| JACKET Nom. Dia. (mm) | Jelly PVC Black 10.30 70 | Jelly PVC Black 7.25 60 | Jelly PVC Black 6.20 60 |
| BENDING RADIUS (mm) | | | |

Flame Retardant Low Smoke Cables (FRLS)

JUVAS Flame Retardant Low Smoke (FRLS) Wires are insulated with special type FRLS PVC Compound. Apart from having high oxygen and temperature index. This insulation has low smoke emitting and toxic fumes suppressing properties.

In case of fire, the ordinary PVC insulation generates dense black smoke and the toxic fumes of hydrochloride acid gas, which causes causalities due to the suffocation and inhaling of toxic fumes. The properties of low smoke and acid gas generation maintain the visibility and accelerate the evacuation and rescue operation. The cable is suitable for use in high rise buildings, hospital, theaters, school and colleges etc. Where density of the people is high.



| Characteristic | Functions | Spec. | Typical Value. | |
|-----------------------|--|-------------|-----------------|----------|
| | | | FRLS | Non-FRLS |
| Critical Oxygen Index | To determine the % of oxygen required for supporting combustion of insulation material at room temperature | ASTM D-2863 | More than 29% | 23% |
| Temperature Index | To determine at what temperature normal oxygen contents of 21% in air will support combustion of insulating material | ASTM D-2863 | More than 250°C | 150°C |
| Acid gas generation | What amount of hydrochloric acid is evolved from PVC insulation under fire condition | IEC 754-1 | More than 20% | 45-50% |



Telephone Cables

JUVAS Telephone & Switch Board Cables are widely used today for communication in high rise building offices, factories, hotels, hospitals, residential complexes etc. & have gained confidence, support and vast goodwill among users.

Only high conductivity electrolytic grade annealed tinned solid copper conductor with nominal dia of 0.5, 0.6 & 0.7mm is used for best performance. Suitable for indoor telephone wiring, switch boards and intercoms, these wires are tested at 2000 volts.

| | | | | | | | | | | | | | | | | | |
|---------------|--|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-------------------|-------------------|--------------------|--------------------|
| S/WS 113 C | Pair Sheath thick- ness (min) O.D. (max.) | 1 0.50 3.5 | 2 0.65 5.3 | 3 0.65 5.6 | 4 0.65 6.1 | 5 0.65 6.7 | 6 0.75 6.8 | 10 0.75 9.0 | 15 0.75 10.4 | 20 0.75 11.5 | 25 0.75 11.5 | 30 0.75 12.7 | 40 0.90 16.0 | 50 1.1 16.2 | 75 1.1 19.6 | 100 1.1 23.0 | 200 1.4 33.0 |
|---------------|--|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-------------------|-------------------|--------------------|--------------------|

Life Guard / Life Shield
Single Core Fr-lsh PVC/HFFR Insulated Industrial Grade Copper Conductor
(unsheathed) Flexible Cables, 1100 Volts

| Basic Code | | Nominal Cross Sectional area of conductor | Number/Nom. Dia of cond. strands* | Thickness of Insulation (Nom) | Approx. overall Diameter | Current Carrying Capacity 2 Cables Single Phase | | Max Conductor Resistance Per KM at 20°C |
|---------------------|--------------------|--|---|-------------------------------------|--------------------------------|--|--|--|
| | | | | | | Conduct Trunking | Unenclosed clipped directly to a surface or on cable trays | |
| Life Guard (FR-LSH) | Life Shield (HFFR) | sq. mm. | mm | mm | mm | Amps | Amps | Ohms |
| WHFFFN...a11X0 | WHFFZN...A111X0 | 1.0** | 14/0.3 | 0.7 | 2.7 | 11 | 12 | 18.10 |
| WHFFFN...a11X5 | WHFFZN...A111X5 | 1.5** | 22/0.3 | 0.7 | 3.0 | 13 | 16 | 12.10 |
| WHFFFN...a12X0 | WHFFZN...A112X5 | 2.5** | 36/0.3 | 0.8 | 3.6 | 18 | 22 | 7.41 |
| WHFFFN...a14X0 | WHFFZN...A114X0 | 4.0 | 56/0.3 | 0.8 | 4.1 | 24 | 29 | 4.95 |
| WHFFFN...a16X0 | WHFFZN...A116X0 | 6.0 | 84/0.3 | 0.8 | 4.6 | 31 | 37 | 3.30 |

Some comparative technical features are given below

| S. No | Feature | Heat Resistant & Flame Retardant PVC | Flame Retardent Low Smoke & halogen FR-LSH | Low Smoke HFFR |
|-------|--|--------------------------------------|--|--------------------|
| 1 | Insulation Material | Spl. HR PVC | Spl. PVC | Spl. Polymer |
| 2 | Insulation Property | Good | Good | Very Good |
| 3 | Temperature Rating | 85°C | 70°C | 70°C |
| 4 | Thermal Stability | Good | Good | Very Good |
| 5 | Flame Retardancy | Very Good | Very Good | Excellent |
| 6 | Safety During Burnings | Good | Good | Excellent |
| 7 | Requirement of critical oxygen index as per AstMD- 2863 to catch fire (%) | >30 | >30 | >35 |
| 8 | Temperature Index | >250°C | >250°C | >280°C |
| 9 | Light Transmission (Visibility) during Cable as per ASMD- 2843 Burning (%) | NA — | >40 Good | >80 Excellent |
| 10 | Release of Halogen Gas During Buring (%) | NA — | <20% Good | <0.5% Excellent |
| 11 | Abrasion Resistance During Installation | Good | Good | Good |



SINCE-1973



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