



# GRANDLAY CABLES

SINCE 1953

## FR-LSH Wires

# SAY NO TO FLAMES



Grandlay Flame Retardant low smoke and FR PVC insulated ISI marked wires meet the requirement of IS: 694:201 single core up to 630 sq. mm & multicore up to 300 sq. mm.



IS: 694  
IS: 1554-PT-1  
IS: 7098-PT-1  
IS: 7098-PT-2

**FIA**

**TAC**

# GRANDLAY FR-LSH FLAME RETARDANT LOW SMOKE WIRES

The bunched conductors are insulated with specially formulated FR-LSH PVC compound. The compound is resistant to moisture, oil, alkali and grease and has high insulation and dielectric values. The FR-LSH properties with high oxygen and temperature index and low acid gas generation help in restricting propagation of flame at high temperatures.

In case of fire, the casualties occur due to suffocation and inhaling toxic fumes/gases rather than burns, moreover the dense black smoke reduce visibility, thereby making the evacuation & rescue operation nearly impossible as such the need for FR-LSH wires arose.

## TECHNICAL DATA

Nominal Cross Sectional Area of The Conductor	Nos./Nominal Dia. of Strand	Nominal Thickness of Insulation	Approx Overall Dia.	Max. Conductor Resistance	Current Rating (AMPS.) 2 Wires, Single Phase#	
SQ.MM	No./MM	MM	MM	Ω/KM at 20°C	In Conduit/ Trunking	Clipped Directly to Surface or On Cable Tray
0.75	**24/.2	0.6	2.4	26.0	7	8
1.0	*14/.3	0.7	2.7	18.1	11	12
1.5	*22/.3	0.7	3.0	12.1	13	16
2.5	*36/.3	0.8	3.7	7.41	18	22
4.0	**56/.3	0.8	4.2	4.95	24	29
6.0	**84/.3	0.8	4.8	3.30	31	37

**Note :** Std. Colours - Red, Yellow, Blue, Black & Green  
Normal Packing Length - 90 Mtrs.

' Conductor : Class 2 As Per IS:8130- 2013 Conforms TD IS:694.2010. ISI Licence No.  
" Conductor Class 5 As Per IS 8130- 2013 CM/L-9675508  
# As Per IS:3961 (Part V) - 1968

## SPECIAL TESTS ON GRANDLAY WIRES

TEST	FUNCTION	SPECIFICATION	SPECIFIED VALUES	OBSD. VALUES
CRITICAL OXYGEN INDEX	TO DETERMINE PERCENTAGE OF OXYGEN REQUIRED FOR SUPPORTING COMBUSTION AT ROOM TEMPERATURE OF INSULATING MATERIAL.	ASTM-D-2863 & IS 694	OXYGEN INDEX : MINIMUM 29%	MORE THAN 32
TEMP. INDEX	TO DETERMINE AT WHAT TEMP. NORMAL OXYGEN CONTENT OF 21% IN AIR WILL SUPPORT COMBUSTION OF INSULATING MATERIAL.	ASTM-D-2843 & IS 694	TEMPERATURE INDEX : MINIMUM 250°C	AROUND 285°C
SMOKE DENSITY	TO DETERMINE THE VISIBILITY (LIGHT TRANSMISSION) UNDER FIRE OF INSULATING MATERIAL.	ASTM-D-2843 & IS 694	LIGHT TRANSMISSION : MINIMUM 40%	AROUND 45%
ACID GAS GENERATION	TO ASCERTAIN THE AMOUNT OF HYDROCHLORIC ACID GAS EVOLVED FROM PVC INSULATION OF WIRE UNDER FIRE CONDITIONS.	IEC 754-1 & IS 694	HYDROCHLORIC ACID GAS RELEASED : 20% MAX.	AROUND 15%