

GEMSCAB

**ALUMINIUM
FLEXIBLE
CABLES &
WIRES**

GEMSCAB – Flexible Multi-Stranded Aluminium Flexible Wires & Cables

Smart Aluminium Alternatives to Copper

What is a Flexible Aluminium Class 5 Conductor?

- **Conductor:** As per **IS 8130** and **IEC 60228**, **Class 5 conductors** are fine multi-stranded wires, providing superior flexibility compared to Class 1 & 2 rigid conductors.
- **Aluminium Advantage:** Aluminium is lightweight and cost-effective compared to copper, making it ideal for large-scale wiring solutions.
- **Insulation:** PVC insulation offers durability, flexibility, resistance to abrasion, chemicals, and moisture. Available in **FR, FR-LSH, HFFR, and LSZH** variants for enhanced fire safety.

Applications & Usage

Industrial & Commercial

- **Control Panels & Switchgear:** Simplified wiring in compact or complex installations.
- **Industrial Machinery:** Internal wiring for a wide range of equipment.
- **Data Centres:** Faster, easier installation in tight spaces.
- **Low Voltage Power Distribution:** In factories, warehouses & commercial complexes.

Residential & Building Wiring

- **Building Wires:** For single & multicore wiring in homes and commercial buildings.
- **High-Rise Complexes:** Reliable wiring for tall buildings & apartments & Mobile Equipment.
- **Renewable Energy Systems:** Solar & wind power connections.
- **Portable Appliances:** Power cords for mobile equipment.
- **Overhead & Underground Installations:** Suitable for conduits, ducts & industrial fixed wiring.

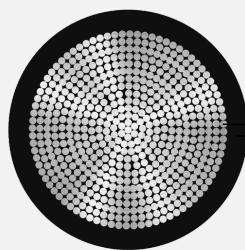
Key Benefits

- **Cost Advantage:** Aluminium is significantly cheaper than copper.
- **Lightweight & Flexible:** Easier to transport, install & handle.
- **Fire Safe:** Available in **FR / FR-LSH / HFFR / LSZH** insulation.
- **Durable & Efficient:** Resistant to abrasion, moisture & corrosion.
- **Environmentally Friendly:** Smart energy-saving alternative to copper.



About GEMSCAB Multi-Stranded Aluminium Flexible Wires & Cables

- **Single Core FR, FR-LSH** insulated wires & cables (unsheathed) – 1100V grade
- **Conductor:** Aluminium Class 5
- **Range:** 2.5 sqmm to 400 sqmm
- **Packaging:** 90M & 180M (up to 6 sqmm), 500M for higher sizes
- **Colours:** Red, Yellow, Blue, Green, Black (others on request)
- **Optional: HFFR/ LSZH** insulation available



High Conductivity Flexible Aluminium Conductor
PVC/FR/FR-LSH/HFFR/LSZH Insulation

Size (sqmm)	Material	Max Temp (°C)	Short Circuit Temp (°C)	Insulation Thickness (mm) Nom	Overall Dia (mm) Max.	Resistance (W/km) Max	Current Rating (A) 40(°C)
2.5	Aluminium	70	160	0.7	4.1	12.4	21
4	Aluminium	70	160	0.8	4.8	7.95	27
6	Aluminium	70	160	0.8	5.3	5.30	35
10	Aluminium	70	160	1.0	7.0	3.14	48
16	Aluminium	70	160	1.0	8.1	1.93	65
25	Aluminium	70	160	1.2	10.2	1.25	84
35	Aluminium	70	160	1.2	11.7	0.903	105
50	Aluminium	70	160	1.4	13.9	0.634	125
70	Aluminium	70	160	1.4	16.0	0.453	150
95	Aluminium	70	160	1.6	18.2	0.336	185
120	Aluminium	70	160	1.6	20.2	0.265	210
150	Aluminium	70	160	1.8	22.5	0.210	240
185	Aluminium	70	160	2.0	24.9	0.175	280
240	Aluminium	70	160	2.2	28.4	0.134	325
300	Aluminium	70	160	2.4	31.0	0.107	380
400	Aluminium	70	160	2.6	36.0	0.083	460

Note:

*The number of strands/ strand diameter shall meet the conductor's resistance requirements.

*Conductor: Class 2 as per IS: 8130 - 2013

*Conductor: Class 5 as per IS: 8130 – 2013



GEMSCAB INDUSTRIES LIMITED

An ISO 9001, ISO 14001, ISO 45001 Certified Company

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