FR IS 694 BUILDING WIRE, 1100 V AC

PRODUCT SPECIFICATION

INDOCABLES FR IS-694 BUILDING WIRE, 1100 V AC

FIG. 1 — SHEATH PRINT AND BUNCHED CONDUCTOR

Images not to scale. Follow table for dimensions

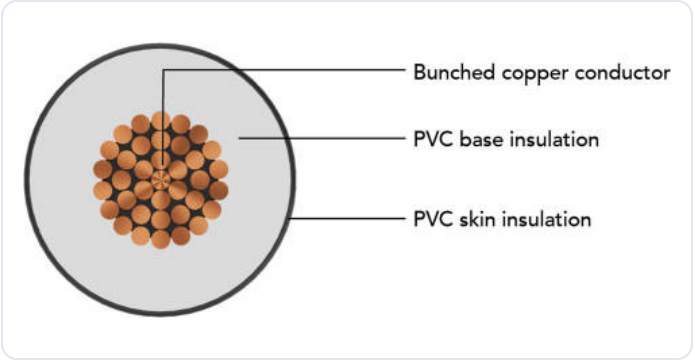

FIG. 2 — CONSTRUCTION, CROSS SECTION

APPLICATION

INDOCABLES FR wire is suitable for use where high flexibility is of prime importance. This is also suitable for indoor installation in industries, household appliances and building electrification.

CHARACTERISTICS

Voltage Rating	1100 V
Operation Temperature	Fixed: −15 °C to 70 °C
Bending Radii	Fixed installation 6 × Overall Diameter · Occasional 4 × Overall Diameter

CONSTRUCTION

- Annealed bunched copper conductor as per IS 8130, class 5.
- Insulated by PVC Type D with FR compound to IS 5831.

Core Identification Red / Yellow / Blue / Black / Green / any customized colour

ELECTRICAL PROPERTY

- High insulation resistance
- Higher current carrying capacity

TEST VOLTAGE

3000 V AC at (20 ± 5) °C

STANDARD FOLLOWS

IS 8130:2013 · IS 5831:1984 · IS 694:2010

COMPLIANCE

Conductor resistance test	IS 8130
Flammability	IEC 60332-1
Oxygen index	ASTM D 2863
Temperature index	IEC 60332-1

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WEIGHT & DIMENSION

PRODUCT CODE	NOMINAL CROSS-SECTIONAL AREA MM²	NO. OF WIRE / WIRE DIA. NO./MM	NOMINAL INSULATION THICKNESS MM	OVERALL DIA. (APPROX.) MM
IC-HW-01-00075-CU-PVC-H07VK-0450-IS694-FR	0.75	24/0.2	0.6	2.3
IC-HW-01-00100-CU-PVC-H07VK-0450-IS694-FR	1	32/0.2	0.6	2.5
IC-HW-01-00150-CU-PVC-H07VK-0450-IS694-FR	1.5	30/0.25	0.6	2.8
IC-HW-01-00250-CU-PVC-H07VK-0450-IS694-FR	2.5	50/0.25	0.7	3.6
IC-HW-01-00400-CU-PVC-H07VK-0450-IS694-FR	4	56/0.3	0.8	4.2
IC-HW-01-00600-CU-PVC-H07VK-0450-IS694-FR	6	84/0.3	0.8	4.7

All six codes are registered in the ITEM MASTER (IC1003818 – IC1003829, option FR, BIS CM/L 6200267207). Register status is DRAFT — see flagged notes.

ELECTRICAL CHARACTERISTICS

Current carrying capacity and Max. DC conductor resistance.

NOMINAL CROSS-SECTIONAL AREA MM²	REFERENCE METHOD B (enclosed in conduit on a wall or in trunking etc.) Amp.	REFERENCE METHOD C (clipped direct) Amp.	MAXIMUM DC CONDUCTOR RESISTANCE AT 20 °C Ω/KM
0.75	7	7.5	26
1	11	12	19.5
1.5	14	16	13.3
2.5	19	22	7.98
4	26	29	4.95
6	31	37	3.3

The ambient temperature is 40 °C. Conductor operating temperature 70 °C.

DE-RATING FACTOR

De-rating factor for various ambient temperature.

AMBIENT TEMPERATURE	35 °C	40 °C	45 °C	50 °C	55 °C	60 °C	65 °C
De-Rating Factor	1.08	1	0.91	0.82	0.7	0.57	0.4

OUTSTANDING FEATURES

HIGH FLEXIBILITY

HIGH SURFACE LUBRICATION SUITABLE TO CONDUIT WIRING

RESISTANT TO MOISTURE FOR USE IN WET AREA

HIGH ABRASION RESISTANCE

RESISTANT TO ACID & ALKALI

CERTIFICATIONS & APPROVALS

ISO 9001
Cert. 99 100 22646 (TÜV SÜD)

ISI

RoHS
Compliant

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Bureau of Indian Standards · CM/L 6200267207

REACH
Compliant

Make in India
Manufactured in India

INTERNAL FLAGGED FOR THE CODE STEWARD

1. **All six codes found in the register.** Every row maps to an existing ITEM MASTER entry (IC1003818, 3819, 3820, 3823, 3826, 3829) with option FR. Nothing derived on this sheet. All six carry STATUS = DRAFT — the register says nothing may be quoted or sold until the steward moves them to ACTIVE.
2. **Voltage grade.** The sheet states 1100 V, but every registered HW item carries `0450` (450/750 V). Register codes reproduced as they stand; the 1100 V text reproduced as written. Please reconcile.
3. **Temperature index cites IEC 60332-1**, the same standard given for flammability; temperature index is normally quoted against ASTM D 2863 / IS 10810 Part 64. Reproduced as written.
4. **Insulation description.** Construction reads "Insulated by PVC Type D with FR compound to IS 5831", while the Fig. 2 callouts read "PVC base insulation" and "PVC skin insulation" (dual-layer). Both reproduced as supplied; confirm which is correct for the sheet.
5. **Source header typo.** The overall-diameter column header read "Mm"; set as mm. No values changed.
6. **Section order.** Application → Characteristics → Construction (with Core Identification, Electrical Property, Test Voltage) → Standard Follows → Compliance → Weight & Dimension → Electrical Characteristics → De-Rating Factor. Outstanding Features icons and the Accreditations / Approval marks sit at the foot of the sheet only — nowhere else, including the running footer.
7. **Images.** Fig. 1 sheath print reads INDOCABLES and Fig. 2 cross section (bunched copper conductor / PVC base insulation / PVC skin insulation) are both retained from the source file.
8. **Third-party marks removed.** The source "Our Accreditations" block carried NABL; the "Approval" block carried ISI, FQC and CE. NABL, FQC and CE removed. ISI retained, ISO 9001 badge added.
9. **Outstanding Features icons** are the brand's own illustrated set. Three are nearest-match stand-ins: weather-resistance for "Resistant to moisture", abrasion-resistance for "High abrasion resistance", chemical-resistant for "Resistant to Acid & Alkali". No icon exists for "High surface lubrication" — a labelled placeholder holds the slot; please commission one.
10. **Document properties.** The source .docx author / last-modified-by field carried a personal name and an empty company field; neither carries into this sheet.
11. **Make in India mark is low resolution.** The only file in the brand set is 80 × 41 px, which upscales soft at print size. A vector or high-resolution version is needed.

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