

RUBBER CABLES



HOZANA CELEBO

HOZRA CEREIL



RUBBER CABLES





INTRODUCTION

"FEDERAL CABLES" (Fedcab) is part of Federal group of companies established in the year 1999. We are proud partners to the various energy needs of Middle east through different sectors. Fedcab's manufacturing facility is located in Abu Dhabi, UAE with state of the art machineries and integrated technical expertise. Apart from cables, Federal manufactures power and distribution transformers, bus ducts and switchgear Panels.

Fedcab current range of cables include XLPE, PVC, LSZH and HO7RN-F insulation conforming to international standards such as BS, IEC, VDE, GOST or any other standard that may be desired by a client.

PRODUCT RANGE

- Low Voltage XLPE or PVC Insulated Power Cables
- LV PVC Insulated building wires
- LV PVC Insulated trirated Panel Wires
- PVC Flexible cables
- LV XLPE Insulated LSZH Cables
- LV LSZH Insulated Wires
- H07RN-F Rubber Cables
- Fire resistant Power Cables
- Fire resistant Screened Muticore & Multipair Cables.
- Instrumentation Cables
- Control & Auxiliary Cables





TECHNICAL ADVISORY SERVICES

Fedcab has a dedicated technical advisory team to assist customers in choosing the apt product technically suitable for their requirements.



QUALITY STANDARD

QUALITY MANAGEMENT SYSTEM CERTIFIED TO ISO 9001

Fedcab's Quality Management System conforming to ISO 9001:2015 is certified by TUV NORD Germany.



Certification to the ISO 9001 standard demonstrates that Fedcab has documented procedures to ensure and demonstrate full compliance with all requirements of the standard and that these procedures are followed by every department in the company, thus ensuring that goods leaving Fedcab's factory are of the best quality and meet customer's requirements in every respect.

Fedcab is committed to supply best quality products which it articulates with the slogan "Quality Unmatched".











ENVIRONMENTAL MANAGEMENT SYSTEM CERTIFIED TO ISO 14001

Fedcab's Environmental Management System conforms to the ISO 14001:2015 International Environmental Management Standard and is certified by TUV NORD, Germany.

Certification to the ISO 14001:2015 International standard shows that Fedcab has a well defined structure and established working practices aimed at limiting its impact on the environment. Measurement and monitoring of effects, issuing work instructions, training of personnel and taking corrective actions are all essential elements to limiting the impact on the environment. Fedcab has set improvement targets to reduce the significant environmental impacts associated with its activities and thus ensuring sustainability.



OCCUPATIONAL HEALTH & SAFETY ASSESSMENT CERTIFIED TO ISO 45001

Fedcab is certified to ISO 45001:2018, an internationally accepted Standard for occupational health and safety management systems. This certification demonstrates Fedcab's adherence to sound occupational health & safety practices.





MANUFACTURING, INHOUSE TESTING & QUALITY MEASURES

Fedcab takes utmost care while manufacturing its products. We have the latest plant and equipment from manufacturers such as Niehoff-Germany, Rosendhal-Austria and Royle systems-USA. We have online diameter gauges from BETA Lasermike, USA, Sikora, Germany and state of the art cable quicke optical non-contact measurement system from Sweden. We have online high voltage testing facility on our extrusion lines. Entire production process is carried out in-house and quality checks are carried out at each stage of production right from raw material to the finished product. We procure raw materials from best available sources which qualify to our in-house quality standards.

Federal Cables have most modern and fully equipped laboratory for testing materials and finished cables. Raw materials, in process materials and finished cables are all tested as per well documented quality norms. The laboratory is manned by engineers and managers having rich experience. We have complete facility for testing cables for fire performance, flame retardance, low smoke and halogen free characteristics etc.

Final testing is done according to the requirement of the various specifications, ensuring full compliance and long term product reliability. In addition to all electrical testing, all cables are subjected to stringent physical and mechanical testing. We have complete Type Testing facility for all types of cables that we produce.







FEDCAB FLEXIBLE RUBBER CABLES H07RN-F

APPLICATION

These cables provide good flexibility and can be used in a wide range of applications requiring higher mechanical and thermal stresses. These cables are weather resistant, oil resistant, UV resistant and flame retardant. They can be used for power supplies at construction sites, workshops, mobile and fixed power supplies, industrial areas, agriculture, indoor and outdoor applications.

Voltage rating (Uo/U) 450 / 750 Volt

Applicable standards BS EN 60228 / IEC 60228

BS EN 50525-2-21(BS 7919)

EN 60332-1-2 / IEC 60332-1-2

EN 50363, EN 60811-404

Temperature rating -30 °C to +60 °C

Short Circuit temperature 200 °C

Minimum bending radius Fixed: 4 x overall diameter

Flexing: 6 x overall diameter

Test voltage 2500 Volt

CONSTRUCTION

Conductor	Flexible class 5 plain copper conductor to BS EN 60228 or IEC 60228
Insulation	Cross-linked Ethylene Propylene Rubber type EI4 to EN 50363-1
Sheath	Cross-linked Synthetic Elastomer type EM2 to EN 50363-2-1



CORE IDENTIFICATION

2 Core: Blue, Brown

3 Core: Green/Yellow, Blue, Brown

●●●● 4 Core: Green/Yellow, Brown, Black, Grey or

Green/Yellow, Blue, Brown, Black

>•••• 5 Core: Green/Yellow, Blue, Brown, Black, Grey

Sheath Colour: Black



450/750 V SINGLE CORE RUBBER CABLES H07RN-F TO BS EN 50525-2-21

Nominal Size	Max. diameter of wire in conductor	Nominal Insulation Thickness	Nominal Sheath Thickness	Approx. Overall Cable Diameter	Approx. Cable weight	Packing length
(mm²)	(mm)	(mm)	(mm)	(mm)	(kg/km)	(m)
1 x 1.5	0.26	0.8	1.4	6.2	50	1000
1 x 2.5	0.26	0.9	1.4	6.8	66	1000
1 x 4	0.31	1.0	1.5	7.7	90	1000
1 x 6	0.31	1.0	1.6	8.5	115	1000
1 x 10	0.41	1.2	1.8	10.2	178	1000
1 x 16	0.41	1.2	1.9	11.4	246	1000

450/750 V MULTI CORE RUBBER CABLES H07RN-F TO BS EN 50525-2-21

Nominal Size	Max. diameter of wire in conductor	Nominal Insulation Thickness	Nominal Sheath Thickness	Approx. Overall Cable Diameter	Approx. Cable weight	Packing length
(mm²)	(mm)	(mm)	(mm)	(mm)	(kg/km)	(m)
2 x 1.5	0.26	0.8	1.5	9.7	112	1000
2 x 2.5	0.26	0.9	1.7	11.4	154	1000
2 x 4	0.31	1.0	1.8	13.0	209	1000
2 x 6	0.31	1.0	2.0	14.5	273	1000
2 x 10	0.41	1.2	3.1	19.5	500	1000
3 x 1.5	0.26	0.8	1.6	10.4	145	1000
3 x 2.5	0.26	0.9	1.8	12.2	208	1000
3 x 4	0.31	1.0	1.9	13.9	285	1000
3 x 6	0.31	1.0	2.1	15.5	373	1000
3 x 10	0.41	1.2	3.3	20.6	675	1000
4 x 1.5	0.26	0.8	1.7	11.5	190	1000
4 x 2.5	0.26	0.9	1.9	13.4	274	1000
4 x 4	0.31	1.0	2.0	15.3	376	1000
4 x 6	0.31	1.0	2.3	17.3	501	1000
4 x 10	0.41	1.2	3.4	22.5	850	1000
5 x 1.5	0.26	0.8	1.8	12.6	235	1000
5 x 2.5	0.26	0.9	2.0	14.7	343	1000
5 x 4	0.31	1.0	2.2	17.0	483	1000
5 x 6	0.31	1.0	2.5	19.1	638	1000
5 x 10	0.41	1.2	3.6	25.0	1050	1000







FEDCAB FLEXIBLE RUBBER CABLES H07R-F

APPLICATION

These cables provide good flexibility and can be used in a wide range of applications requiring higher mechanical and thermal stresses. These cables are weather resistant, oil resistant, UV resistant and flame retardant. They can be used for power supplies at construction sites, workshops, mobile and fixed power supplies, industrial areas, agriculture, indoor and outdoor applications.

Voltage rating (Uo/U) 450 / 750 Volt

Applicable standards BS EN 60228 / IEC 60228

BS EN 50525-2-21(BS 7919) EN 60332-1-2 / IEC 60332-1-2 EN 50363, EN 60811-404

Temperature rating -30 °C to +60 °C

Short Circuit temperature 200 °C

Minimum bending radius Fixed: 4 x overall diameter

Flexing: 6 x overall diameter

Test voltage 2500 Volt

CONSTRUCTION

Conductor	Flexible class 5 plain copper conductor as per BS EN 60228 or IEC 60228
Insulation	Special Thermoplastic Elastomer generally to type EI4
Sheath	Special Thermoplastic Elastomer generally to type EM2

CORE IDENTIFICATION

2 Core: Blue, Brown

3 Core: Green/Yellow, Blue, Brown

●●●● 4 Core: Green/Yellow, Brown, Black, Grey or

Green/Yellow, Blue, Brown, Black

●●●●● 5 Core: Green/Yellow, Blue, Brown, Black, Grey

Sheath Colour: Black
PRODUCT RANGE

Single core cables: 1.5 Sq.mm to 300 Sq.mm

Multicore cables: 2 core to 5 core & 25 Sq.mm to 150 Sq.mm







450/750 V SINGLE CORE RUBBER CABLES H07R-F GEN. TO BS EN 50525-2-21

Nominal Size	Max. diameter of wire in conductor	Nominal Insulation Thickness	Nominal Sheath Thickness	Approx. Overall Cable Diameter	Approx. Cable weight	Packing length
(mm²)	(mm)	(mm)	(mm)	(mm)	(kg/km)	(m)
1 x 1.5	0.26	0.8	1.4	6.2	50	1000
1 x 2.5	0.26	0.9	1.4	6.8	66	1000
1 x 4	0.31	1.0	1.5	7.7	90	1000
1 x 6	0.31	1.0	1.6	8.5	115	1000
1 x 10	0.41	1.2	1.8	10.2	178	1000
1 x 16	0.41	1.2	1.9	11.4	246	1000
1 x 25	0.41	1.4	2.0	13.2	351	1000
1 x 35	0.41	1.4	2.2	14.8	465	1000
1 x 50	0.41	1.6	2.4	17.0	638	1000
1 x 70	0.51	1.6	2.6	19.3	863	1000
1 x 95	0.51	1.8	2.8	21.6	1122	1000
1 x 120	0.51	1.8	3.0	24.1	1407	1000
1 x 150	0.51	2.0	3.2	26.6	1760	500
1 x 185	0.51	2.2	3.4	29.4	2144	500
1 x 240	0.51	2.4	3.5	33.0	2764	500
1 x 300	0.51	2.6	3.6	34.6	3354	500







ELECTRICAL CHARACTERISTICS

H07RN-F

Nominal Size	Maximum	Cur	rent Ratir	ng	Short circuit Approx Volatge		latge Drop
	conductor	Single phase		3Phase	rating	Single	Three
	Resistance DC at @20° C	Z Sillyte Z Core	2 Core or 3 core	3, 4 or 5C	for 1 Sec	Phase	Phase
(mm²)	(Ω/km)	(A)	(A)	(A)	kA	V/A/km	V/A/km
1.5	13.3	21	16	16	0.211	32	27
2.5	7.98	33	25	20	0.352	19	16
4	4.95	40	30	26	0.563	12	10
6	3.30	52	39	34	0.844	7.8	6.7
10	1.91	68	51	47	1.41	4.6	4.0
16	1.21	98	73	63	2.25	2.9	2.5

H07R-F

	Maximum	Current Rating			Short circuit	Approx Volatge Drop	
Nominal	conductor	Single phase		3Phase	rating	Single	Three
Size	Resistance DC at @20° C	2 Single Core	2 Core or 3 core	3, 4 or 5C	for 1 Sec	Phase	Phase
(mm²)	(Ω/km)	(A)	(A)	(A)	kA	V/A/km	V/A/km
25	0.780		97	83	3.52	1.85	1.55
35	0.554	140		102	4.92	1.32	1.15
50	0.386	175		124	7.04	0.93	0.84
70	0.272	216		158	9.85	0.67	0.58
95	0.206	258		192	13.37	0.53	0.44
120	0.161	302		222	16.88	0.43	0.36
150	0.129	347		255	21.11	0.36	0.30
185	0.106	394		291	26.03	0.27	0.26
240	0.0801	471		343	33.77	0.24	0.21
300	0.0641	541		394	42.21	0.21	0.185

Air Temperature(°C)	20	25	30	35	40	45	50	55
Rating Factor	1.11	1.08	1.00	0.91	0.82	0.71	0.58	0.41









Federal Cables

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