

## WELDING CABLES (SINGLE SHEATHED)

WELDING CABLES IS KNOWN FOR ITS FLEXIBILITY AND DURABILITY AND MANY AUTOMATIC AND MANUAL WELDING APPLICATIONS REQUIRE THE CABLE TO HOLD UP TO REPEATED MOVEMENT OVER ROUGH SURFACES.

TYPE OF CABLES	: SINGLE CORE ULTRA FLEXIBLE ANNEALED PLAIN ELECTROLYTIC GRADE COPPER WELDING CABLES
DESIGNATION	: NBR SINGLE SHEATHED ROUND ULTRA FLEXIBLE COPPER WELDING CABLES
COPPER	: ULTRA FLEXIBLE ANNEALED EC COPPER CONDUCTOR (CLASS 6 & CLASS 5) IEC 60228, IS 8130
SEPARATOR	: POLYESTER TAPE
COVERING	: NBR SINGLE SHEATHED ULTRA FLEXIBLE NITRILE BUTADIENE RUBBER (IS 6380/1984)
<b>MECHANICAL PROPERTY (NBR)</b>	
TENSILE STRENGTH	: 10.0 N/MM <sup>2</sup> (Min.)
ELONGATION	: 300% (Min.)
TEMP. RANGE	: (-30° C to +90° C)
TEST VOLTAGE	: 2500 V (ELECTRICAL PROPERTY)
SHEATH COLOR	: ORANGE, BLACK
MIN. BENDING RADIUS	: 6 X CABLE DIAMETER
FLAME PROPAGATION	: FLAME RETARDANT ACCORDING TO AS PER IEC 60332-1
<b>ELECTRICAL CHARACTERISTICS DUTY CYCLE AND CURRENT CARRYING CAPACITY</b>	
	: THE CURRENT CARRYING CAPACITY OF A WELDING CABLE DEPEND ON THE LENGTH OF THE DUTY CYCLE. THE DUTY CYCLE IS THE LENGTH OF TIME DURING WHICH A LOADED CURRENT PASSES THROUGH THE CABLE OVER AN OPERATION PERIOD OF 5 MINUTES, EXPRESSED AS A PERCENTAGE OF THAT PERIOD.
STANDARD LENGTH	: 100, 200, 300 AND 500 METER. ALSO HIGHER LENGTH AVAILABLE ON YOUR REQUEST (+/- 5%)
CABLES FEATURES	: FLEXIBILITY UNDER ROUGH, OPEN DRY, DAMP CONDITIONS.
	: OIL RESISTANT TO DIN EN 60811-2-1
	: HIGH PERFORMANCE ULTRA FLEXIBLE WELDING LEAD SINGLE SHEATHED
	: SPECIALLY DESIGNED TO EXCELLENT WEATHER RESISTANCE
	: FLAME RETARDANT TO IEC 60332-1
	: EXCELLENT ULTRA FLEXIBLE TO LAST LONGER IN FLEX
	: HIGH RESISTANCE TO CUTS, TEAR AND ABRASION
	: VERY GOOD CURRENT CARRYING CAPACITY OF ACCORDING TO REQUIREMENT FOR WELDING CABLES
APPLICATION	: THE CABLES ARE AVAILABLE PROGRESSIVE SEQUENTIAL MARKING, BRAND NAME AND SIZE PRINTED ON SHEATH
	: SPECIFICALLY DESIGNED FOR MACHINE WELDING AND HAND WELDING TO WORK IN DRY, DAMP, WET LOCATIONS AND OUTDOORS.
REF. STD	: IEC 60228, IEC 60245-6, BS 638-4, IS 6380/84, IS 8130, IS 9857, DIN VDE 0295
ISO CERTIFICATION	: ISO 9001:2015, CE, RoHS, ISO 14001:2015, ISO 45001:2018
PRODUCT CERTIFICATION	: IS 694:2010, IS 7098 P-1, TUV RHEINLAND CERTIFICATE No. R 60160536

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### TECHNICAL DETAILS & DIMENSION CURRENT RATING AT VARIOUS DUTY CYCLES

NUMBER AND NOMINAL CROSS SECTIONAL AREA OF CONDUCTORS	TOTAL NO. OF STRANDS/MAX. DIA OF WIRE	NOMINAL RADIAL THICKNESS OF COVERING	NOMINAL SHEATH DIA	COPPER MAXIMUM DC RESISTANCE @ at 20 ° C	RATED CURRENT - DUTY CYCLE				
					100%	85%	60%	30%	20%
mm <sup>2</sup>	Nos./mm	mm	mm	Ω / km	Amps	Amps	Amps	Amps	Amps
1 x 10	322/0.2	2.00	8.20	1.91	100	110	125	180	225
1 x 16	511/0.2	2.00	9.20	1.21	135	145	170	245	300
1 x 25	798/0.2	2.00	10.70	0.780	180	195	230	325	400
1 x 35	1121/0.2	2.00	11.90	0.554	225	245	285	410	500
1 x 50	1596/0.2	2.20	13.80	0.386	285	305	365	520	630
1 x 70	2220/0.2	2.40	16.80	0.272	355	385	455	640	790
1 x 95	1349/0.3	2.60	18.30	0.206	430	465	555	780	950
1 x 120	608/0.5	3.00	21.70	0.161	500	540	640	910	1110
1 x 150	760/0.5	3.00	24.00	0.129	580	620	740	1040	1290
1 x 185	931/0.5	3.40	26.30	0.106	665	715	850	1200	1470
1 x 240	1216/0.5	3.50	29.20	0.0801	710	770	910	1290	1580
1 x 300	1501/0.5	3.60	31.80	0.0641	800	850	1030	1450	1780
1 x 400	2035/0.5	3.80	36.00	0.0486	920	1000	1190	1680	2060

### REDUCTION FACTORS FOR WELDING CABLE USED AT HIGHER AMBIENT TEMPERATURE

AMBIENT AIR TEMPERATURE (°C)	25	30	35	40	45	50	55	60
RATING FACTORS	1.0	0.96	0.91	0.87	0.82	0.76	0.69	0.64

### TYPICAL GUIDANCE VALES FOR DIFFERENT WELDING PROCESSES ARE AS FOLLOWS

FULLY AUTOMATIC WELDING 100% | SEMI-AUTOMATIC WELDING 65-85% | MANUAL WELDING 30-60% | VERY INFREQUENT OR OCCASIONAL WELDING 20%

NOTE : THE NO. OF STRAND & STRANDS DIAMETER SHALL BE SUCH THAT IT MEETS THE CONDUCTOR RESISTANCE AS PER RELEVANT STANDARD

THE ABOVE DATA IS INDICATIVE AND MAY BE REVISED WITHOUT PRIOR INFORMATION. JOHNSON CABLES WILL NOT BE LIABLE FOR ANY DAMAGES ARISING OUT OF INCORRECT APPLICATION.