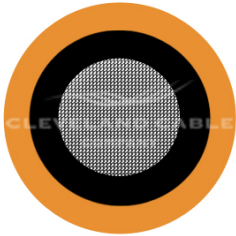


BS638 (PART 4) 0361TQ WELDING CABLE SINGLE CORE



APPLICATION

0361TQ is an orange sleeved flexible welding cable used for connection of an electric welding machine to the welding gun. This cable carries large current for the purposes of welding metal together in automatic and manual welding machines. It is high quality cable for all work cycles from occasional use to a 100% duty cycle. Suitable for use in factory assembly lines and conveyor systems, machine tool and car manufacturing / repairs etc.

CABLE STANDARDS

BS 638 Part 4

Flame retardant to BS EN 50525-2-81

Conforms to IEC 60332-1-2

CONSTRUCTION

Conductor: Tinned annealed flexible stranded circular copper conductor, single core

Insulation: Neutral Ethylene Propylene Rubber (EPR)

Sheath: Chlorosulphinated Polythene (CSP)

Sheath Colour: ■ Orange

CHARACTERISTICS

Voltage Rating: 100 Volts

Temperature Limits: -20°C to +85°C

Minimum Bending Radius: As per cable manufacturer datasheet

CORE IDENTIFICATION

All sizes available in Neutral

Should not be installed at temperatures below 0°C

BS638 (PART 4) WELDING CABLE

CCC CODE	CONDUCTOR SIZE (MM ²)	STRANDING (MM)	NUMBER OF CORES	WEIGHT (KG/KM)	OVERALL DIAMETER (MM)	GLAND REF
0361TQ16OR	16	513/0.20	1	235	11.5	20S
0361TQ25OR	25	783/0.20	1	330	13	20
0361TQ35OR	35	1107/0.20	1	440	14.5	25
0361TQ50OR	50	1566/0.20	1	610	17	25
0361TQ70OR	70	2214/0.20	1	840	19.5	32
0361TQ95OR	95	2997/0.20	1	1120	22	32
0361TQ120OR	120	608/0.50	1	1410	24	32
0361TQ185OR	185	925/0.50	1	2100	29	40

DUTY CYCLE AND CURRENT CARRYING CAPACITY

The current carrying capacity of a welding cable depends 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. For example, if the current is flowing for the whole 5 minutes the duty cycle is 100%, and if the current is flowing for 1 minute the duty cycle is 20%. As conductor temperature varies according to the time in use as well as current, ratings shown are given as a guide. The permissible loading of the cable for duty cycles other than those shown in the table can be calculated using the following formula: $I = I_{100} \times \sqrt{100/F}$ Where: I: is the maximum permissible loading current for the required duty cycle. I100 : is the maximum permissible loading current for a duty cycle of 100%. F: is the required duty cycle calculated as a percentage of the 5 minute operation period.

TYPICAL GUIDANCE VALUES 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%

BS638 (PART 4) WELDING CABLE – CARRYING CAPACITY (AMPERES)

NOMINAL CROSS SECTIONAL AREA MM ²	CURRENT RATING FOR SINGLE CYCLE OPERATION OVER A MAXIMUM PERIOD OF 5 MINUTES			
	100%	80%	60%	35%
16	135	145	175	230
25	180	195	230	300
35	225	245	290	375
50	285	305	365	480
70	355	385	460	600
95	430	470	560	730
120	500	540	650	850
150	580	630	750	980
185	665	720	860	1120

THE ABOVE TABLE IS IN ACCORDANCE WITH TABLE A.5 OF BS 638 PART 4

THE INFORMATION CONTAINED WITHIN THIS DATASHEET IS FOR GUIDANCE ONLY AND IS SUBJECT TO CHANGE WITHOUT NOTICE OR LIABILITY. WE BELIEVE THE INFORMATION IS CORRECT AT THE TIME OF PUBLICATION. PLEASE NOTE WHEN SELECTING CABLE ACCESSORIES THAT ACTUAL CABLE DIMENSIONS MAY VARY DUE TO MANUFACTURING TOLERANCES.