Curly Flex TPR Cable - 0.75mm² to 2.5mm²

Description

Curly Flex TPR cable is constructed with finely stranded Class 5 copper conductors to ensure high flexibility during repeated cycles of extension and retraction. The internal cores are insulated with PVC, while the outer sheath is composed of Thermoplastic Rubber (TPR), a material specifically engineered for superior mechanical durability compared to standard thermoplastic jacketing. This robust construction allows the cable to maintain its structural integrity in demanding environments characterized by exposure to moisture, thermal fluctuations, and chemical contaminants such as oils and greases.

This cable is widely utilized in industrial and commercial sectors for equipment requiring mobility, such as hydraulic lifting platforms, conveyors, and heavy-duty automotive assemblies. Typical electrical specifications include a voltage rating of 300/500V, with operational temperature limits generally ranging from -5°C to +70°C for flexible applications. To maintain longevity, the bending radius is typically maintained between 8 and 15 times the outer diameter during movement. These characteristics, combined with a high resistance to abrasion and environmental stress, make it a reliable choice for connecting sensors, power tools, and control units in rugged work zones.

The primary technical advantage of this spiralised configuration over a linear cable is its inherent ability to manage variable distances without excess slack. By utilizing a high-memory coiled design, the cable can extend up to five times its compressed length and return to its original form, effectively eliminating tripping hazards and potential entanglement. Furthermore, the coiled geometry acts as a mechanical buffer, absorbing tension that would otherwise cause strain at the termination points. This characteristic significantly reduces the risk of conductor fatigue and jacket tearing, which are common failure modes for straight cables in dynamic applications.

Key Features

Voltage Rating
300/500 Volts

Flame Retardancy
BS EN/IEC 60332-1-2

Temperature Limits
Temperature Range: 0°C to +70°C

Core Colours

3 core: Green Yellow | Blue | Brown

4 core: Green Yellow | Brown | Black | Grey

5 core: Green Yellow | Blue | Brown | Black | Grey

Standards

- BS EN/IEC 60332-1-2
- BS EN/IEC 60228

Construction

- **Conductor**: Class 5 Flexible Tinned Copper
- **Insulation**: Polyvinyl Chloride (PVC)
- **Outer Sheath**: Rubber Compound
- **Sheath Colour**: Black

Training & Testing Lab

AN ISO/IEC 17025 ACCREDITED FACILITY

Cleveland Cable Test & Training Lab
Our state-of-the-art cable testing facility ensures that every cable meets the highest standards of quality and compliance through continuous, rigorous testing.

ISO/IEC 17025 Accredited Testing Laboratory
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CPR
Cleveland Cable Company is committed to compliance with the Construction Products Regulation (CPR). Where applicable, all cables manufactured after 1st July 2017 have been assessed in accordance with CPR requirements, with full supporting documentation available.

Our Sustainability Commitment

We are committed to the journey to Net Zero as a business partner, an employer and a community member.

By thinking and acting sustainably, we deliver excellent customer service while reducing carbon emissions in collaboration with our customers and suppliers.

CLEVELAND CABLE COMPANY

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Cleveland Cable Company has been independently assessed by EcoVadis, a globally recognised provider of business sustainability ratings. Our score places us among the top 35% of companies evaluated worldwide, reflecting our strong commitment to environmental, social, and ethical performance

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Curly Flex TPR Cable - 0.75mm² to 2.5mm² - Dimensions

Reference	Overall Spiral Diameter (mm)	Extended Length (mm)	Unextended Length (mm)	Conductor Size (mm2)	No Of Cores	Overall Diameter(mm)
CURLYFLEXTPR3X/75	35.00	5000	1000	0.75	3	9.50
CURLYFLEXTPR4X/75	35.00	5000	1000	0.75	4	9.50
CURLYFLEXTPR5X/75	37.00	5000	1000	0.75	5	10.50
CURLYFLEXTPR3X1	35.00	5000	1000	1	3	9.50
CURLYFLEXTPR4X1	37.00	5000	1000	1	4	9.50
CURLYFLEXTPR5X1	40.00	5000	1000	1	5	12.0
CURLYFLEXTPR3X1/5	36.00	5000	1000	1.5	3	10.0
CURLYFLEXTPR4X1/5	42.00	5000	1000	1.5	4	11.50
CURLYFLEXTPR5X1/5	51.00	5000	1000	1.5	5	13.0
CURLYFLEXTPR3X2/5	42.00	5000	1000	2.5	3	11.50
CURLYFLEXTPR4X2/5	47.00	5000	1000	2.5	4	12.50
CURLYFLEXTPR5X2/5	53.00	5000	1000	2.5	5	14.0

TABLE 4F3A - Flexible cables, non-armoured (COPPER CONDUCTORS) Reproduced from BS7671:2018 Wiring Regulations

CURRENT-CARRYING CAPACITY (amperes): and MASS SUPPORTABLE (kg):

Conductor cross sectional area	Current-carrying capacity		Maximum mass supportable by twin flexible cable (see Regulations 522.7.2 and 559.5.2
	Single-phase AC 2	Three-phase AC 3	
(mm2)	(Amps)	(Amps)	(kg)
0.5	3	3	2
0.75	6	6	3
1	10	10	5
1.25	13	-	5
1.5	16	16	5
2.5	25	20	5
4	32	25	5

Where cable is on a reel see the notes to Table 4F1A.

RATING FACTOR FOR AMBIENT TEMPERATURE

60 °C thermoplastic or thermosetting insulated cable:	Ambient temperature	35 °C	40 °C	45 °C	50 °C	55 °C		
	Rating factor	0.91	0.82	0.71	0.58	0.41		
90 °C thermoplastic or thermosetting insulated cable:	Ambient temperature	35 to 50 °C	55 °C	60 °C	65 °C	70 °C		
	Rating factor	1.0	0.96	0.83	0.67	0.47		
110 °C flexible cable:	Ambient temperature	35 to 80 °C		85 °C	90 °C	95 °C	100 °C	105 °C
	Rating factor	1.0		0.96	0.85	0.74	0.60	0.42
150 °C flexible cable:	Ambient temperature	35 to 120 °C		125 °C	130 °C	135 °C	140 °C	145 °C
	Rating factor	1.0		0.96	0.85	0.74	0.60	0.42
Glass fibre flexible cable:	Ambient temperature	35 to 50 °C		155 °C	160 °C	165 °C	170 °C	175 °C
	Rating factor	1.0		0.92	0.82	0.71	0.57	0.40

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TABLE 4F3B - Flexible cables, non-armoured (COPPER CONDUCTORS) Reproduced from BS7671:2018 Wiring Regulations

VOLTAGE DROP (per ampere per metre):

Conductor operating temperature: 60 °C

Conductor cross sectional area	DC or single-phase AC	Three-phase AC 3
(mm^2)	(mV/A/m)	(mV/A/m)
0.5	93	80
0.75	62	54
1	46	40
1.25	37	-
1.5	32	27
2.5	19	16
4	12	10

NOTE:
The values above are for 60 °C thermoplastic or thermosetting insulated flexible cables and for other types of flexible cable they are to be multiplied by the following factors:

FOR:	
90 °C thermoplastic or thermosetting insulated	1.09

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.

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