

Motor cable | TPE | chainflex® CF310.UL

- For extremely heavy duty applications
- TPE outer jacket
- Shielded
- Oil-resistant, bio-oil-resistant
- Flame retardant
- UV-resistant
- Hydrolysis and microbe-resistant

Dynamic information

	Bend radius	e-chain® linear flexible fixed	minimum 7.5 x d minimum 6 x d minimum 4 x d
	Temperature	e-chain® linear flexible fixed	-35 °C to +90 °C -45 °C to +90 °C (following DIN EN 60811-504) -50 °C to +90 °C (following DIN EN 50305)
	v max.	unsupported gliding	10 m/s 6 m/s
	a max.		100 m/s ²
	Travel distance		Unsupported travel distances and up to 400 m and more for gliding applications, Class 6

Cable structure

	Conductor	Conductor consisting of pre-wound conductor bundles (following DIN EN 60228).
	Core insulation	Mechanically high-quality TPE mixture.
	Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % linear, approx. 90 % optical
	Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Signal black (similar to RAL 9004)

Electrical information

	Nominal voltage	600/1000 V (following DIN VDE 0298-3)
	Testing voltage	4000 V (following DIN EN 50395)

Properties and approvals

	UV resistance	High.
	Oil resistance	Oil resistant (following DIN EN 60811-404), bio-oil resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4.
	Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
	Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992).
	UL/CSA	Style 10492 and 21218, 1000 V, 80 °C
	NFPA	Following NFPA 79-2012 chapter 12.9.

Class 6.6.4.1



DNV-GL



EAC



CTP



CEI



Lead-free



Cleanroom



CE

Basic requirements	low	1	2	3	4	5	6	7	highest
Travel distance	unsupported	1	2	3	4	5	6	7	≥ 400 m
Oil resistance	none	1	2	3	4	5	6	7	highest
Torsion	none	1	2	3	4	5	6	7	±180°

Certified according to GL type testing – Certificate no.: 61 938-14 HH

Certificate no. RU C-DE.ME77.B.02324 (TR ZU)

Certificate no. C-DE.PB49.B.00420 (Fire safety)

Following CEI 20-35.

Following 2011/65/EU (RoHS-II).

According to ISO Class 1. Outer jacket material complies with CF34.UL.25.04.D, tested by IPA according to standard 14644-1.
Following 2014/35/EU.

Guaranteed lifetime according to guarantee conditions (Page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35/-25	10	11	12
-25/+80	7.5	8.5	9.5
+80/+90	10	11	12

* Higher number of double strokes? Online lifetime calculation: www.igus.eu/chainflexlife

Typical mechanical application areas

- For extremely heavy duty applications
- Almost unlimited resistance to oil, also with bio-oils
- Indoor and outdoor applications, UV resistant
- Unsupported travel distances and up to 400 m and more for gliding applications
- Storage and retrieval units for high-bay warehouses, Machining units/machine tools, quick handling equipment, Clean room, semiconductor handling, outdoor cranes, low temperature applications

Part No.	Number of cores and conductor nominal cross section [mm ²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF310.UL.25.01	(1x2.5)C	6.5	39	61
CF310.UL.40.01	(1x4.0)C	7.0	54	79
CF310.UL.60.01	(1x6.0)C	7.5	76	102
CF310.UL.100.01	(1x10.0)C	8.5	117	150
CF310.UL.160.01	(1x16.0)C	10.0	178	217
CF310.UL.250.01	(1x25.0)C	12.0	271	319
CF310.UL.350.01	(1x35.0)C	13.0	383	431
CF310.UL.500.01	(1x50.0)C	15.0	525	575
CF310.UL.700.01	(1x70.0)C	17.5	763	829
CF310.UL.950.01	(1x95.0)C	21.0	995	1100
CF310.UL.1200.01	(1x120.0)C	22.0	1245	1347
CF310.UL.1500.01	(1x150.0)C	24.5	1560	1668
CF310.UL.1850.01	(1x185.0)C	27.5	1890	2147

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core x = without earth core

