










# Motor cable | TPE | chainflex® CF300.UL.D

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



## Dynamic information

 <b>Bend radius</b>	<b>e-chain® linear flexible</b>	minimum 7.5 x d minimum 6 x d
	<b>fixed</b>	minimum 4 x d
 <b>Temperature</b>	<b>e-chain® linear flexible</b>	-35 °C to +90 °C -45 °C to +90 °C (following DIN EN 60811-504)
	<b>fixed</b>	-50 °C to +90 °C (following DIN EN 50305)
 <b>v max.</b>	<b>unsupported</b>	10 m/s
 <b>a max.</b>	<b>gliding</b>	6 m/s
 <b>Travel distance</b>	Unsupported travel distances and up to 400 m and more for gliding applications, Class 6	
 <b>Torsion</b>	± 90°, with 1 m cable length, Class 2	







## Cable structure

 <b>Conductor</b>	Conductor consisting of pre-wound conductor bundles (following DIN EN 60228).	
 <b>Core insulation</b>	Mechanically high-quality TPE mixture.	
 <b>Outer jacket</b>	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

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

## Properties and approvals

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

# Class 6.6.4.2

 <b>DNV-GL</b>	Certified according to GL type testing – Certificate no.: 61 938-14 HH
 <b>EAC</b>	Certificate no. RU C-DE.ME77.B.02324 (TR ZU)
 <b>CTP</b>	Certificate no. C-DE.PB49.B.00420 (Fire safety)
 <b>CEI</b>	Following CEI 20-35.
 <b>Lead-free</b>	Following 2011/65/EU (RoHS-II).
 <b>Cleanroom</b>	According to ISO Class 1. Outer jacket material complies with CF34.UL.25.04.D, tested by IPA according to standard 14644-1.
 <b>DESINA</b>	According to VDW, DESINA standardisation.
 <b>CE</b>	Following 2014/35/EU.

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°

## 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]	R min. [factor x d]	R min. [factor x d]
	-35/-25	10	11	12	12	12
	-25/+80	7.5	8.5	9.5	9.5	9.5
	+80/+90	10	11	12	12	12

\* Higher number of double strokes? Online lifetime calculation: [www.igus.eu/chainflexlife](http://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 [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
<b>CF300.UL.40.01.D</b>	1x4.0	6.5	39	61
<b>CF300.UL.60.01.D</b>	1x6.0	7.0	58	82
<b>CF300.UL.100.01.D</b>	1x10.0	8.0	96	123
<b>CF300.UL.160.01.D</b>	1x16.0	9.5	154	189
<b>CF300.UL.250.01.D</b>	1x25.0	11.0	240	286
<b>CF300.UL.350.01.D</b>	1x35.0	12.5	336	384
<b>CF300.UL.500.01.D</b>	1x50.0	14.5	480	531
<b>CF300.UL.700.01.D</b>	1x70.0	16.5	696	757
<b>CF300.UL.950.01.D</b>	1x95.0	20.0	917	1023
<b>CF300.UL.1200.01.D</b>	1x120.0	21.5	1160	1271
<b>CF300.UL.1500.01.D</b>	1x150.0	23.5	1435	1550
<b>CF300.UL.1850.01.D</b>	1x185.0	26.5	1776	2014

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

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