

Motor cable | TPE | chainflex® CF34.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

	Bend radius	e-chain® linear	minimum 7.5 x d
		flexible	minimum 6 x d
		fixed	minimum 4 x d
	Temperature	e-chain® linear	-35 °C to +90 °C
		flexible	-45 °C to +90 °C (following DIN EN 60811-504)
		fixed	-50 °C to +90 °C (following DIN EN 50305)
	v max.	unsupported	10 m/s
		gliding	6 m/s
	a max.		80 m/s²
	Travel distance	Unsupported travel distances and up to 400 m and more for gliding applications, Class 6	
	Torsion	± 90°, with 1 m cable length, Class 2	

Cable structure

	Conductor	Cores < 10 mm²: Stranded conductor in especially bending-resistant design consisting of bare copper wires (following DIN EN 60228). Cores ≥ 10 mm²: Conductor consisting of pre-wound conductor bundles (following DIN EN 60228).	
	Core insulation	Mechanically high-quality, especially low-capacitance TPE mixture.	
	Core structure	Cores wound with a short pitch length around a high tensile strength centre element.	
	Core identification	Black cores with white numerals, one core green-yellow. 1. Core: U / L1 / C / L+ 2. Core: V / L2 3. Core: W / L3 / D / L- 4. Core: 4 / N	
	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)	
	CFRIP®	Strip cables faster: a tear strip is moulded into the outer jacket Video ► www.igus.eu/CFRIP	

Electrical information

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

Class 6.6.4.2

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°

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 21184, 1000 V, 80 °C
	NFPA	Following NFPA 79-2012 chapter 12.9.
	DNV-GL	Certified according to GL type testing – Certificate no.: 61 938-14 HH
	EAC	Certificate no. RU C-DE.ME77.B.02324 (TR ZU)
	CTP	Certificate no. C-DE.PB49.B.00420 (Fire safety)
	CEI	Following CEI 20-35.
	Lead-free	Following 2011/65/EU (RoHS-II).
	Cleanroom	According to ISO Class 1, material/cable tested by IPA according to ISO standard 14644-1.
	DESINA	According to VDW, DESINA standardisation.
	CE	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

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Class 6.6.4.2

Strip cables 50% faster

igus® chainflex® CF34.UL.D

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF34.UL.15.04.D	4G1.5	8.5	64	112
CF34.UL.25.04.D	4G2.5	10.5	106	172
CF34.UL.40.04.D	4G4.0	12.0	174	255
CF34.UL.60.04.D	4G6.0	14.0	253	360
CF34.UL.60.05.D	5G6.0	15.5	317	440
CF34.UL.100.04.D	4G10.0	17.0	435	568
CF34.UL.100.05.D	5G10.0	19.0	550	729
CF34.UL.160.04.D	4G16.0	20.5	697	871
CF34.UL.160.05.D	5G16.0	23.0	877	1103
CF34.UL.250.04.D	4G25.0	24.5	1094	1348
CF34.UL.100.04.O.PE.D	4x10.0	17.0	435	568
CF34.UL.160.04.O.PE.D	4x16.0	20.5	697	871
CF34.UL.500.03.O.PE.D ¹⁾	3x50.0	30.5	1650	2084

¹⁾ Phase-out model**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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Oil resistance
Torsion

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