Control cable | PUR | chainflex® CF2

- For extremely heavy duty applications
- PUR outer jacket
- Shielded
- Oil and coolant-resistant
- Flame retardant
- Notch-resistant
- Hydrolysis and microbe-resistant

Example image

Dynamic information

Bend radius	e-chain® linear	minimum 5 x d
	flexible	minimum 4 x d
	fixed	minimum 3 x d
Temperature	e-chain® linear	-20 °C to +80 °C
	flexible	-40 °C to +80 °C (following DIN EN 60811-504)
	fixed	-50 °C to +80 °C (following DIN EN 50305)
v max.	unsupported	10 m/s
	gliding	5 m/s
a max.		80 m/s²
Travel distance		Unsupported travel distances and up to 100 m for gliding applications, Class 5

Cable structure

Conductor	Stranded conductor in especially bending-resistant design consisting of bare copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Core structure	**Number of cores < 12:** Cores wound in a layer with a short pitch length. **Number of cores ≥ 12:** Cores wound in bundles which are then wound around a high tensile strength centre element, all with optimised short pitch lengths and directions.
Core identification	Colour code in accordance with DIN 47100.
Inner jacket	PVC mixture, adapted to suit the requirements in e-chains®.
Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % inear, approx. 90 % optical
Outer jacket	Low-adhesion, highly abrasion-resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2). Colour: Anthracite grey (similar to RAL 7016)

Electrical information

Nominal voltage	300/500 V (following DIN VDE 0298-3)
Testing voltage	2000 V (following DIN EN 50395)

Class 6.5.3.1

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

Properties and approvals

UV resistance	High.
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3.
Offshore	MUD-resistant following NEK 606 - status 2009.
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 10493 and 20317, 300 V, 80 °C
NFPA	Following NFPA 79-2012 chapter 12.9.
EAC	Certificate no. RU C-DE.ME77.B.01254 (TR ZU)
CTP	Certificate no. C-DE.PB49.B.00416 (Fire safety)
CEI	Following CEI 20-35.
Lead-free	Following 2011/65/EU (RoHS-II).
Cleanroom	According to ISO Class 1. Outer jacket material complies with CF27.07.05.02.01.D, tested by IPA according to standard 14644-1.
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]
-20/-10	6.8	7.5	8.5
-10/+70	5	6.8	7.5
+70/+80	6.8	7.5	8.5

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

Typical mechanical application areas

- For heaviest duty applications
- Almost unlimited resistance to oil
- Indoor and outdoor applications
- Unsupported travel distances and up to 100 m for gliding applications
- Storage and retrieval units for high-bay warehouses, machining units/packaging machines, quick handling equipment, indoor cranes, refrigerating sector

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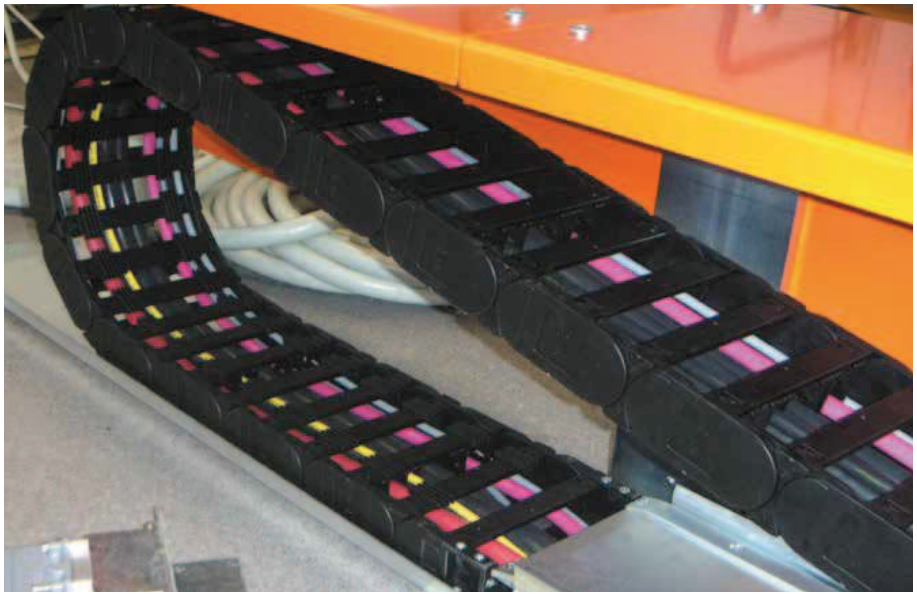
CF2
PUR
5 x d

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
CF2.01.04	(4x0.14)C	6.5	17	40
CF2.01.08	(8x0.14)C	7.5	29	65
CF2.01.12	(12x0.14)C	9.5	49	101
CF2.01.18	(18x0.14)C	10.5	53	125
CF2.01.24 [3)]	(24x0.14)C	11.5	65	135
CF2.01.36	(36x0.14)C	14.5	88	200
CF2.01.48	(48x0.14)C	16.5	135	310
CF2.02.04	(4x0.25)C	7.0	24	53
CF2.02.08	(8x0.25)C	8.5	41	83
CF2.02.18	(18x0.25)C	12.5	96	190
CF2.02.24 [3)]	(24x0.25)C	13.5	120	220
CF2.02.48	(48x0.25)C	18.0	230	450

The chainflex® types marked with a [3)] refer to cables that are based on a bundling of 4 cores each. Due to their excellent electrical properties (star-quad with especially low crosstalk), these cables can be used in virtually all cases in which twisted-pair cables are normally required.
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



chainflex® CF2 cables are resistant to oil and coolants. e-chain®: System E4/00