

Data cable | TPE | chainflex® CF298

| | | | | | | | | | |
|--------------------|-------------|---|---|---|-------|---------|---|---------|---------|
| 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° | | | | |



Example image

- For heaviest duty applications and especially small radii up to 4 x d
- TPE outer jacket
- Oil-resistant, bio-oil-resistant
- PVC and halogen-free
- Low-temperature-flexible
- Hydrolysis and microbe-resistant

Dynamic information

| | | | |
|--|------------------------|------------------------|--|
| | Bend radius | e-chain® linear | minimum 4 x d |
| | | flexible | minimum 4 x d |
| | Temperature | e-chain® linear | -35 °C to +90 °C |
| | | flexible | -50 °C to +90 °C (following DIN EN 60811-504) |
| | v max. | unsupported | 10 m/s |
| | | gliding | 6 m/s |
| | a max. | | 100 m/s ² |
| | | | |
| | Travel distance | | Short, very fast applications with small radii and tight design space, Class 5 |
| | Torsion | | ± 90°, with 1 m cable length, Class 2 |

Cable structure

| | | |
|--|----------------------------|--|
| | Conductor | Conductor consisting of a special highly flexible alloy. |
| | Core insulation | Mechanically high-quality TPE mixture. |
| | Core structure | Cores wound in a layer with a short pitch length. |
| | Core identification | Colour code in accordance with DIN 47100. CF298.02.03: brown, blue, black CF298.03.04: brown, blue, black, white |
| | Outer jacket | Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Steel-blue (similar to RAL 5011) |

Electrical information

| | | |
|--|------------------------|-----------|
| | Nominal voltage | 300/300 V |
| | Testing voltage | 1500 V |

Class 7.5.4.2

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. |
| | Silicone-free | Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992). |
| | Halogen-free | Following DIN EN 60754. |
| | EAC | Certificate no. RU C-DE.ME77.B.02780 (TR ZU) |
| | Lead-free | Following 2011/65/EU (RoHS-II). |
| | Cleanroom | According to ISO Class 1. Outer jacket material complies with CF9.15.07, tested by IPA according to standard 14644-1. |
| | CE | Following 2014/35/EU. |

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

| Double strokes* | 10 million | 15 million | 20 million |
|---------------------------|---------------------|---------------------|---------------------|
| Temperature, from/to [°C] | R min. [factor x d] | R min. [factor x d] | R min. [factor x d] |
| -35/-25 | 5 | 6 | 7 |
| -25/+80 | 4 | 5 | 6 |
| +80/+90 | 5 | 6 | 7 |

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

Typical mechanical application areas

- For heaviest duty applications and especially small radii up to 4 x d
- Almost unlimited resistance to oil, also with bio-oils
- Indoor and outdoor applications, UV resistant
- Especially for short, very fast applications with small radii and tight design space
- Pick and place machines, automatic doors, Clean room, very quick handling equipment

| Part No. | Number of cores and conductor nominal cross section mm ² | Outer diameter (d) max. mm | Copper index kg/km | Weight kg/km |
|-------------|---|----------------------------|--------------------|--------------|
| CF298.01.02 | 2x0.14 | 4.5 | 5 | 15 |
| CF298.01.04 | 4x0.14 | 5.5 | 9 | 26 |
| CF298.01.08 | 8x0.14 | 7.0 | 17 | 45 |
| CF298.02.03 | 3x0.25 | 5.5 | 13 | 29 |
| CF298.02.04 | 4x0.25 | 6.0 | 17 | 36 |
| CF298.02.07 | 7x0.25 | 7.0 | 29 | 54 |
| CF298.02.08 | 8x0.25 | 7.5 | 33 | 63 |
| CF298.03.04 | 4x0.34 | 6.0 | 20 | 38 |
| CF298.03.07 | 7x0.34 | 7.5 | 35 | 64 |
| CF298.05.04 | 4x0.5 | 6.5 | 28 | 49 |

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

