

# Data cable | TPE | chainflex® CF299

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

## Dynamic information

	<b>Bend radius</b>	<b>e-chain® linear</b>	minimum 4 x d
		<b>flexible</b>	minimum 4 x d
		<b>fixed</b>	minimum 3 x d
	<b>Temperature</b>	<b>e-chain® linear</b>	-35 °C to +90 °C
		<b>flexible</b>	-50 °C to +90 °C (following DIN EN 60811-504)
		<b>fixed</b>	-55 °C to +90 °C (following DIN EN 50305)
	<b>v max.</b>	<b>unsupported</b>	10 m/s
		<b>gliding</b>	6 m/s
	<b>a max.</b>		100 m/s <sup>2</sup>
	<b>Travel distance</b>	Short, very fast applications with small radii and tight design space, Class 5	

## Cable structure

	<b>Conductor</b>	Conductor consisting of a special highly flexible alloy.
	<b>Core insulation</b>	Mechanically high-quality TPE mixture.
	<b>Core structure</b>	Cores wound in a layer with a short pitch length.
	<b>Core identification</b>	Colour code in accordance with DIN 47100.
	<b>Inner jacket</b>	TPE mixture, adapted to suit the requirements in e-chains®.
	<b>Overall shield</b>	Extremely bending resistant, special alloy shield. Coverage approx. 70 % inear, approx. 90 % optical
	<b>Outer jacket</b>	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

	<b>Nominal voltage</b>	300/300 V
	<b>Testing voltage</b>	1500 V

# Class 7.5.4.1

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

	<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>Silicone-free</b>	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992).
	<b>Halogen-free</b>	Following DIN EN 60754.
	<b>EAC</b>	Certificate no. RU C-DE.ME77.B.02780 (TR ZU)
	<b>Lead-free</b>	Following 2011/65/EU (RoHS-II).
	<b>Cleanroom</b>	According to ISO Class 1. Outer jacket material complies with CF9.15.07, tested by IPA according to standard 14644-1.
	<b>CE</b>	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](http://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 <sup>2</sup>	Outer diameter (d) max. mm	Copper index kg/km	Weight kg/km
CF299.01.02	(2x0.14)C	6.0	18	37
CF299.01.04	(4x0.14)C	6.5	23	46
CF299.01.08	(8x0.14)C	8.5	36	77
CF299.02.04	(4x0.25)C	7.0	33	59
CF299.02.07	(7x0.25)C	8.5	49	85
CF299.03.08	(8x0.34)C	9.5	64	111

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



Example image

