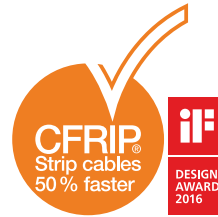


Control cable | PUR | chainflex® CF78.UL

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



Dynamic information

	Bend radius	e-chain®	minimum 6.8 x d
		flexible	minimum 5 x d
		fixed	minimum 4 x d
	Temperature	e-chain®	-25 °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	Finely stranded conductor 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	Black cores with white numerals, one core green-yellow.
	Inner jacket	TPE mixture, adapted to suit the requirements in e-chains®.
	Overall shield	Bending-resistant braiding made of tinned copper wires. Coverage approx. 55 % linear, approx. 80 % 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: Window-grey (similar to RAL 7040)
	CFRIP®	Strip cables faster: a tear strip is moulded into the inner jacket Video ► www.igus.eu/CFRIP

Electrical information

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

Class 5.5.3.1

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	Medium.
	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).
	Halogen-free	Following DIN EN 60754.
	UL/CSA	Style 11323 and 21223, 1000 V, 80 °C
	NFPA	Following NFPA 79-2012 chapter 12.9.
	DNV-GL	Certified according to GL type testing – Certificate no.: 61 935-14 HH
	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 CF77.UL.05.12.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	
	< 10 m	≥ 10 m	< 10 m	≥ 10 m	< 10 m	≥ 10 m
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]	R min. [factor x d]
-25/-15	8.5	10	9.5	11	10.5	12
-15/+70	6.8	7.5	7.5	8.5	8.5	9.5
+70/+80	8.5	10	9.5	11	10.5	12

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

Typical mechanical application areas

- For heavy duty applications
- Almost unlimited resistance to oil
- Indoor and outdoor applications with average sun radiation
- Unsupported travel distances and up to 100 m for gliding applications
- Machining units/machine tools, Storage and retrieval units for high-bay warehouses, Packaging industry, quick handling equipment, refrigerating sector

Control cable | PUR | chainflex® CF78.UL

Strip cables 50% faster

igus® chainflex® CF78.UL

Example image

Class 5.5.3.1

Basic requirements
Travel distance
Oil resistance
Torsion

low	1	2	3	4	5	6	7	highest
unsupported	1	2	3	4	5	6	7	≥ 400 m
none	1	2	3	4	5	6	7	highest
none	1	2	3	4	5	6	7	±180°

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. mm	Copper index kg/km	Weight kg/km
CF78.UL.05.04	(4G0.5)C	8.0	40	79
CF78.UL.05.05	(5G0.5)C	8.0	48	94
CF78.UL.05.07	(7G0.5)C	9.5	62	123
CF78.UL.05.09	(9G0.5)C	11.0	81	148
CF78.UL.05.12	(12G0.5)C	12.5	97	207
CF78.UL.05.18	(18G0.5)C	14.5	156	257
CF78.UL.05.25	(25G0.5)C	16.0	180	366
CF78.UL.07.03	(3G0.75)C	8.0	44	79
CF78.UL.07.04	(4G0.75)C	8.5	52	99
CF78.UL.07.05	(5G0.75)C	9.5	64	108
CF78.UL.07.07	(7G0.75)C	10.5	87	146
CF78.UL.07.12	(12G0.75)C	13.5	145	252
CF78.UL.07.18	(18G0.75)C	15.5	207	367
CF78.UL.07.36	(36G0.75)C	22.0	416	728
CF78.UL.07.42	(42G0.75)C	24.5	489	800
CF78.UL.10.03	(3G1.0)C	8.5	53	90
CF78.UL.10.04	(4G1.0)C	9.0	65	107
CF78.UL.10.05	(5G1.0)C	9.5	78	124
CF78.UL.10.07	(7G1.0)C	11.0	110	170
CF78.UL.10.12	(12G1.0)C	14.5	178	307
CF78.UL.10.18	(18G1.0)C	17.0	256	424
CF78.UL.10.25	(25G1.0)C	20.0	347	567
CF78.UL.15.03	(3G1.5)C	9.5	72	133
CF78.UL.15.04	(4G1.5)C	10.0	90	139
CF78.UL.15.05	(5G1.5)C	10.5	115	166
CF78.UL.15.07 ¹⁷⁾	(7G1.5)C	12.5	153	226
CF78.UL.15.12	(12G1.5)C	16.0	249	403
CF78.UL.15.18	(18G1.5)C	19.0	368	564
CF78.UL.15.25	(25G1.5)C	22.5	495	755
CF78.UL.15.36	(36G1.5)C	26.5	715	1147
CF78.UL.15.42	(42G1.5)C	29.5	884	1360
CF78.UL.25.04	(4G2.5)C	11.5	148	212
CF78.UL.25.05	(5G2.5)C	12.5	177	247
CF78.UL.25.07 ¹⁷⁾	(7G2.5)C	14.5	245	350
CF78.UL.25.12	(12G2.5)C	19.0	407	610
CF78.UL.40.04	(4G4.0)C	14.0	217	342

¹⁷⁾ When using the cables with „7 G 1.5 mm²“ and „7 G 2.5 mm²“ minimum bend radius must be 17.5 x d with gliding travel distance ≥ 5 m.Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core x = without earth coreOrder example: **CF78.UL.05.04** – to your desired length (0.5 m steps)
CF78.UL chainflex® series .05 Code nominal cross section .04 Code Number of coresOnline order ► www.chainflex.eu/CF78.ULDelivery time 24h or today.
Delivery time means time until shipping of goods.