


















# Power Cables



# Power Cable Selection

Chainflex® cable	Jacket	Shield	Class	Bending radius moving (factor x d)	Temperature moving from/to °F (°C)	Oil-resistant	Torsion resistant	V max. ft/s (m/s) unsupported	V max. ft/s (m/s) gliding	a max. ft/s² (m/s²)	Approvals and standards
<b>Power cables</b>											
CF30	PVC		5.3.2	7.5	+23/+158°F (-5/+70°C)	✓	✓	32.81 ft/s (10 m/s)	16.41 ft/s (5 m/s)	262.4 ft/s² (80 m/s²)	CE  
CF31	PVC	✓	5.3.2	7.5	+23/+158°F (-5/+70°C)	✓		32.81 ft/s (10 m/s)	16.41 ft/s (5 m/s)	262.4 ft/s² (80 m/s²)	CE  
CF34	TPE		6.4.4	7.5	-31/+194°F (-35/+90°C)	✓	✓	32.81 ft/s (10 m/s)	19.69 ft/s (6 m/s)	262.4 ft/s² (80 m/s²)	CE  
CF35	TPE	✓	6.4.4	7.5	-31/+194°F (-35/+90°C)	✓		32.81 ft/s (10 m/s)	19.69 ft/s (6 m/s)	262.4 ft/s² (80 m/s²)	CE  
CF300	TPE	✓	6.4.4	7.5	-31/+194°F (-35/+90°C)	✓		32.81 ft/s (10 m/s)	19.69 ft/s (6 m/s)	328.1 ft/s² (100 m/s²)	CE  
CFPE	TPE		6.4.4	7.5	-31/+194°F (-35/+90°C)	✓		32.81 ft/s (10 m/s)	19.69 ft/s (6 m/s)	328.1 ft/s² (100 m/s²)	CE  
CF310	TPE	✓	6.4.4	7.5	-31/+194°F (-35/+90°C)	✓		32.81 ft/s (10 m/s)	19.69 ft/s (6 m/s)	328.1 ft/s² (100 m/s²)	CE  
CFBRAID	TPE		6.4.4	7.5	-31/+194°F (-35/+90°C)	✓		32.81 ft/s (10 m/s)	19.69 ft/s (6 m/s)	262.4 ft/s² (80 m/s²)	CE  
CFCRANE	igupren		6.4.3	7.5	-31/+194°F (-35/+90°C)	✓		32.81 ft/s (10 m/s)	19.69 ft/s (6 m/s)	164.0 ft/s² (50 m/s²)	CE
<b>Pneumatic Hose</b>											
CF AIR	PU			10	-13/+176°F (-25/+80°C)	✓		9.84 ft/s (3 m/s)	9.84 ft/s (3 m/s)	65.62 ft/s² (20 m/s²)	

CF30

igus®

# PVC Power Cable

Chainflex® CF30

PVC Standard Energy Chain® cable, oil-resistant, flame-retardant

CLASS  
5.3.2

Price Index



**Conductor**  
Highly flexible special conductor

**Core**  
Conductors stranded around high-tensile center core

**Outer jacket**  
gusset filled, pressure extruded, oil-proof PVC blend



## Construction

**Conductor:** Finely stranded bare copper wires, according to EN 60228

**Conductor insulation:** Mechanically high quality TPE blend

**Conductor twisting:** Conductors cabled with short pitch over a high-tensile-strength center core.

**Conductor colors:** Black with white numbers, one conductor green-yellow.

1. U / L1 / C / L+
2. V / L2
3. W / L3 / D / L-
4. 4 / N
5. green / yellow

**Outer jacket:** PVC-based, low-adhesion blend, adapted to the requirements of the Energy Chain®. Silicon-free in compliance with PV 3.10.7 - status 1992. **Color:** black (RAL 9005).

## Technical Data

**Minimum bending radius, moving:** 7.5 x outer cable diameter

**Minimum bending radius, fixed:** 4 x outer cable diameter

**Permissible temperature, moving:** +23°F to +158°F (-5°C to +70°C)

**Permissible temperature, fixed:** -4°F to +158°F (-20°C to +70°C)

**Voltage:** 1000V

**Testing voltage:** 4000V

**Oil resistance:** Medium

**UV resistance:** Medium

**Regulations:** cRUus: UL AWM style for USA & Canada: 2570 80°C 1000V **Flame Resistance:** FT1, **CE:** CEI 20-20, **DESINA, RoHS: 2002/95/EC;** Please reference the Design Section (Chapter 1) for more information.

**Cleanroom:** According to ISO Class 2, material/cable tested by IPA according to standard 14644-1. Test cable CF5-10-07

## Typical Applications

- for high mechanical load requirements
- preferably indoor applications, outdoor is acceptable for temperatures greater than +41°F (+5°C)
- for unsupported and gliding travel up to 328 ft (100m)
- torsion +/-90° with 3 ft cable length
- storage and retrieval units for high-bay warehouses, machine tools, quick handling, indoor cranes

Part No.	AWG	No. of Conductors and Rated Cross-Section in mm <sup>2</sup>	Outer Diameter (approx)		Copper Index		Weight	
			in.	(mm)	lbs/mft	(kg/km)	lbs/mft	(kg/km)
CF30-15-04	16	4 x 1.5	.34	(8.5)	37	(55)	69	(102)
CF30-25-04	14	4 x 2.5	.41	(10.5)	65	(95)	112	(164)
CF30-40-04	12	4 x 4	.47	(12.0)	103	(152)	160	(235)
CF30-40-05	12	5 x 4	.51	(13.0)	130	(191)	195	(286)
CF30-60-04	10	4 x 6	.55	(14.0)	159.9	(235)	234	(344)
CF30-60-05	10	5 x 6	.59	(15.0)	199.3	(293)	283.7	(417)
CF30-100-04	8	4 x 10	.69	(17.5)	266	(391)	378	(555)
CF30-100-05	8	5 x 10	.77	(19.5)	332.7	(489)	474.8	(698)
CF30-160-04	6	4 x 16	.81	(20.5)	415	(610)	567.4	(834)
CF30-160-05	6	5 x 16	.93	(23.5)	519	(763)	722.5	(1062)
CF30-250-04	4	4 x 25	1.00	(25.5)	642.2	(944)	915	(1345)
CF30-350-04	2	4 x 35	1.12	(28.5)	910.9	(1339)	1177.6	(1731)
CF30-500-04	1	4 x 50	1.34	(34.0)	1291.2	(1898)	1766	(2596)

NOTE: The mentioned external diameters are maximum values.

No Minimum Order • No Cut Charges on up to 10 cuts of the same part number



10.144

# PVC Power Cable

## Chainflex® CF31

PVC Standard Energy Chain® cable, shielded, oil-resistant, flame-retardant



CF31

Price Index



CLASS  
5.3.2

### Construction

**Conductor:** Finely stranded bare copper wires, according to EN 60228

**Conductor insulation:** Mechanically high quality TPE blend

**Conductor twisting:** Conductors cabled with short pitch over a high-tensile-strength center core.

**Conductor colors:** Black with white numbers, one conductor green-yellow.

1. U / L1 / C / L+
2. V / L2
3. W / L3 / D / L-
4. 4 / N
5. green / yellow

**Intermediate jacket:** PVC-based blend, adapted to the requirements of the Energy Chain®.

**Total shielding:** Tinned copper braid, 90% optical coverage

**Outer jacket:** PVC-based, low-adhesion blend, adapted to the requirements of the Energy Chain®. Silicone-free in compliance with PV 3.10.7 - status 1992. **Color:** black (RAL 9005).

### Technical Data

**Minimum bending radius, moving:** 7.5 x outer cable diameter

**Minimum bending radius, fixed:** 4 x outer cable diameter

**Permissible temperature, moving:** +23°F to +158°F (-5°C to +70°C)

**Permissible temperature, fixed:** -4°F to +158°F (-20°C to +70°C)

**Voltage:** 1000V

**Testing voltage:** 4000V

**Oil resistance:** Medium

**UV resistance:** Medium

**Regulations:** cRUus: UL AWM style for USA & Canada: 2570 80°C 1000V **Flame Resistance:** FT1, **CE:** CEI 20-20, **RoHS:** 2002/95/EC; Please reference the Design Section (Chapter 1) for more information.

**Cleanroom:** According to ISO Class 2, material/cable tested by IPA according to standard 14644-1. Test cable CF5-10-07

### Typical Applications

- for high mechanical load requirements
- preferably indoor applications, outdoor is acceptable for temperatures greater than +41°F (+5°C)
- for unsupported and gliding travel up to 328 ft (100m)
- storage and retrieval units for high-bay warehouses, machine tools, quick handling, indoor cranes
- designed for AC motors with variable frequency drive (VFD)

Part No.	AWG	No. of Conductors and Rated Cross-Section in mm <sup>2</sup>	Outer Diameter (approx)		Copper Index		Weight	
			in.	(mm)	lbs/mft	(kg/km)	lbs/mft	(kg/km)
CF31-15-04	16	4 x 1.5	.43	(11.0)	56	(82)	115	(169)
CF31-25-04	14	4 x 2.5	.49	(12.5)	87	(128)	161	(237)
CF31-25-05	14	5 x 2.5	.53	(13.5)	106	(156)	189	(278)
CF31-40-04	12	4 x 4	.55	(14.0)	131	(192)	217	(319)
CF31-40-05	12	5 x 4	.59	(15.0)	167	(246)	264	(388)
CF31-60-04	10	4 x 6	.63	(16.0)	202.0	(297)	320.0	(470)
CF31-60-05	10	5 x 6	.73	(18.5)	243.5	(358)	384.4	(565)
CF31-100-04	8	4 x 10	.81	(20.5)	329.3	(484)	513.0	(754)
CF31-100-05	8	5 x 10	.87	(22.0)	406.8	(598)	614.3	(903)
CF31-160-04	6	4 x 16	.91	(23.0)	501.4	(737)	711.6	(1046)
CF31-250-04	4	4 x 25	1.12	(28.5)	735.4	(1081)	1092	(1605)
CF31-350-04	2	4 x 35	1.25	(32.0)	1015.7	(1493)	1420.4	(2088)
CF31-500-04	1	4 x 50	1.48	(37.5)	1415.7	(2081)	2048.3	(3011)
CF31-700-04	2/0	4 x 70	1.85	(47.0)	2014	(2961)	3163	(4650)

NOTE: The mentioned external diameters are maximum values.

No Minimum Order • No Cut Charges on up to 10 cuts of the same part number



7.5x



10.145

CF34

# TPE Power Cable

CLASS  
6.4.4

Price Index



## Chainflex® CF34

TPE Energy Chain® cable, oil-resistant, bio-oil-resistant,  
UV-resistant, flame-retardant

**Conductor**  
Highly flexible  
special  
conductor

**Core**  
Conductors  
stranded around  
high tensile  
center core

**Outer jacket**  
gusset filled,  
pressure  
extruded,  
TPE blend



### Construction

**Conductors:** Finely stranded bare copper wires, according to EN 60228.

**Conductor insulation:** Mechanically high quality TPE blend

**Conductor twisting:** Conductors cabled with short pitch over a high-tensile-strength center core.

**Conductor colors:** Black with white numbers, one conductor green-yellow.

1. U / L1 / C / L+
2. V / L2
3. W / L3 / D / L-
4. 4 / N
5. green / yellow

**Outer jacket:** TPE particularly abrasion-resistant, high-flex blend, oil-resistant, coolant-resistant. Silicon-free in compliance with PV 3.10.7 - status 1992. **Color:** black

### Technical Data

**Minimum bending radius, moving:** 7.5 x outer cable diameter

**Minimum bending radius, fixed:** 4 x outer cable diameter

**Permissible temperature, moving:** -31°F to +194°F (-35°C to +90°C)

**Permissible temperature, fixed:** -40°F to +194°F (-40°C to +90°C)

**Voltage:** 1000V

**Testing voltage:** 4000V

**Oil resistance:** High

**UV resistance:** High

**Regulations:** cRUUs: UL AWM style for USA & Canada: 21184 80°C 1000V **Flame Resistance:** FT1, CE, DESINA, RoHS: 2002/95/EC; Please reference the Design Section (Chapter 1) for more information.

**Cleanroom:** According to ISO Class 1, material/cable tested by IPA according to standard 14644-1.

### Typical Applications

- for maximum mechanical load requirements
- indoor and outdoor applications, UV-resistant
- for unsupported and gliding travel up to 1312 ft (400m)
- torsion +/-90° with 3 ft cable length
- storage and retrieval units for high-bay warehouses, machine tools, quick handling, cleanroom, semiconductor insertion, ship-to-shore, outdoor cranes, low temperature applications

Part No.	AWG	No. of Conductors and Rated Cross- Section in mm <sup>2</sup>	Outer Diameter (approx)		Copper Index		Weight	
			in.	(mm)	lbs/mft	(kg/km)	lbs/mft	(kg/km)
CF34-15-04	16	4 x 1.5	.34	(8.5)	37	(55)	71	(105)
CF34-25-04	14	4 x 2.5	.39	(10.0)	62	(91)	106	(156)
CF34-40-04	12	4 x 4	.47	(12.0)	103	(152)	159	(234)
CF34-60-04	10	4 x 6	.55	(14.0)	160	(235)	232	(341)
CF34-60-05	10	5 x 6	.59	(15.0)	193	(283)	282	(414)
CF34-100-04	8	4 x 10	.67	(17.0)	266	(391)	361	(531)
CF34-100-05	8	5 x 10	.73	(18.5)	333	(489)	446	(655)
CF34-160-04	6	4 x 16	.77	(19.5)	415	(610)	536	(788)
CF34-160-05	6	5 x 16	.93	(23.5)	519	(763)	729	(1072)
CF34-250-04	4	4 x 25	.96	(24.5)	642	(944)	847	(1245)
CF34-100-04-O-PE <sup>††</sup>	6	4 x 10	.67	(17.0)	266	(391)	361	(531)
CF34-500-03-O-PE <sup>††</sup>	1	3 x 50	1.18	(30.0)	968	(1423)	1323	(1947)

NOTE: The mentioned external diameters are maximum values.

<sup>††</sup>O-PE = no ground (green/yellow wire)



10.146

No Minimum Order • No Cut Charges on up to 10 cuts of the same part number

# TPE Power Cable



CF35

## Chainflex® CF35

TPE Energy Chain® Cable, shielded, oil-resistant, bio-oil-resistant, UV-resistant, flame-retardant

CLASS  
6.4.4

Price Index



### Construction

**Conductors:** Finely stranded bare copper wires, according to EN 60228

**Conductor insulation:** Mechanically high quality TPE blend

**Conductor twisting:** Conductors cabled with short pitch over a high-tensile-strength center core.

**Conductor colors:** Black with white numbers, one conductor green-yellow.

1. U / L1 / C / L+
2. V / L2
3. W / L3 / D / L-
4. green / yellow

**Inner Jacket:** TPE

**Shielding:** Tinned copper braid, 90% optical coverage

**Outer jacket:** TPE particularly abrasion-resistant, high-flex blend, oil-resistant, coolant-resistant, Silicon-free in compliance with PV 3.10.7 - status 1992. **Color:** black (RAL 9005)

### Technical Data

**Minimum bending radius, moving:** 7.5 x outer cable diameter

**Minimum bending radius, fixed:** 4 x outer cable diameter

**Permissible temperature, moving:** -31°F to +194°F (-35°C to +90°C)

**Permissible temperature, fixed:** -40°F to +194°F (-40°C to +90°C)

**Voltage:** 1000V

**Testing voltage:** 4000V

**Oil resistance:** High

**UV resistance:** High

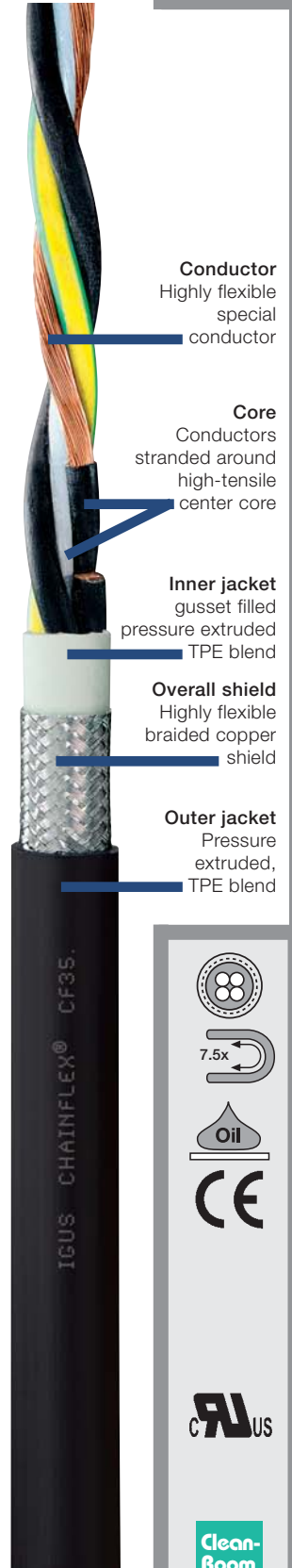
**Regulations:** cRUUs: UL AWM style for USA & Canada: 21184 80°C 1000V **Flame Resistance:** FT1, CE, RoHS: 2002/95/EC; Please reference the Design Section (Chapter 1) for more information.

**Cleanroom:** According to ISO Class 1, material/cable tested by IPA according to standard 14644-1.

Test cable CF34-25-04

### Typical Applications

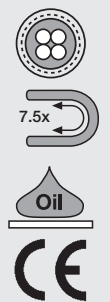
- for maximum mechanical load requirements
- indoor and outdoor applications, UV-resistant
- designed for AC motors with variable frequency drive (VFD)
- for unsupported and gliding travel up to 1312 ft (400m)
- storage and retrieval units for high-bay warehouses, machine tools, quick handling, cleanroom, semiconductor insertion, ship-to-shore, outdoor cranes, low temperature applications



Part No.	AWG	No. of Conductors and Rated Cross-Section in mm <sup>2</sup>	Outer Diameter (approx)		Copper Index		Weight	
			in.	(mm)	lbs/mft	(kg/km)	lbs/mft	(kg/km)
CF35-05-04	20	4 x 0.5	.32	(8.0)	26.5	(39)	55.1	(81)
CF35-07-04	18	4 x 0.75	.34	(8.5)	35.3	(52)	67.3	(99)
CF35-15-04	16	4 x 1.5	.37	(9.5)	56	(82)	99.0	(146)
CF35-25-04	14	4 x 2.5	.43	(11.0)	84	(123)	139.5	(205)
CF35-40-04	12	4 x 4	.55	(14.0)	137	(201)	218.0	(321)
CF35-60-04	10	4 x 6	.61	(15.5)	198	(291)	291.0	(428)
CF35-100-04	8	4 x 10	.77	(19.5)	305	(449)	457.0	(672)
CF35-160-04	6	4 x 16	.87	(22.0)	473.5	(696)	657.0	(965)
CF35-250-04	4	4 x 25	1.06	(27.0)	736	(1082)	1013.0	(1489)

NOTE: The mentioned external diameters are maximum values.

No Minimum Order • No Cut Charges on up to 10 cuts of the same part number



10.147

CF300

iglus®

# TPE Power Cable

CLASS  
6.4.4

Price Index



## Chainflex® CF300

TPE Energy Chain® cable, oil-resistant, bio-oil-resistant,  
UV-resistant, flame-retardant

**Conductor**  
Highly flexible  
special  
conductor

**Conductor  
insulation**  
Pressure  
extruded  
TPE blend

**Outer jacket**  
Pressure  
extruded, TPE  
blend

Clean-  
Room

10.148

### Construction

**Conductors:** Finely stranded bare copper wires, according to EN60882

**Conductor insulation:** Mechanically high quality TPE blend.

**Outer jacket:** TPE - Particularly abrasion-resistant, high-flex blend, oil-resistant, coolant-resistant and UV-resistant. Silicon-free in compliance with PV 3.10.7 - status 1992. **Color:** black.

### Technical Data

**Minimum bending radius, moving:** 7.5 x outer cable diameter

**Minimum bending radius, fixed:** 4 x outer cable diameter

**Permissible temperature, moving:** -31°F to +194°F (-35°C to +90°C)

**Permissible temperature, fixed:** -40°F to +194°F (-40°C to +90°C)

**Nominal voltage:** 1000 V

**Testing voltage:** 4000V

**Oil resistance:** High

**UV resistance:** High

**Regulations: cRUus:** UL AWM style for USA & Canada: 21184 80°C 1000V **Flame Resistance:** FT1, CE, RoHS: 2002/95/EC; Please reference the Design Section (Chapter 1) for more information.

**Cleanroom:** According to ISO Class 1, material/cable tested by IPA according to standard 14644-1.

Test cable CF34-25-04

### Typical Applications

- for maximum mechanical load requirements
- indoor and outdoor applications, UV-resistant
- for unsupported and gliding travel up to 1312 ft (400m) or more
- storage and retrieval units for high-bay warehouses, machine tools, quick handling, cleanroom, semiconductor insertion, ship-to-shore, outdoor cranes, low temperature applications

Part No.	AWG	No. of Conductors and Rated Cross- Section in mm <sup>2</sup>	Outer Diameter		Copper Index		Weight	
			in.	(mm)	lbs/mft	(kg/km)	lbs/mft	(kg/km)
CF300-60-01	10	1 x 6.0	.28	(7)	39.4	(58)	57.8	(85)
CF300-100-01	8	1 x 10.0	.31	(8)	65.3	(96)	88.4	(130)
CF300-160-01	6	1 x 16.0	.37	(9.5)	104.7	(154)	129.2	(190)
CF300-250-01	4	1 x 25.0	.45	(11.5)	163.2	(240)	190.4	(280)
CF300-350-01	2	1 x 35.0	.49	(12.5)	228.5	(336)	272.0	(400)
CF300-500-01	1	1 x 50.0	.57	(14.5)	326.4	(480)	353.6	(520)
CF300-700-01	2/0	1 x 70.0	.63	(16)	424.0	(623)	460.0	(676)
CF300-950-01	3/0	1 x 95.0	.75	(19.0)	577.0	(848)	631.0	(927)
CF300-1200-01	4/0	1 x 120.0	.85	(21.5)	720.0	(1059)	779.0	(1145)
CF300-1500-01	300 MCM	1 x 150.0	.91	(23)	897.0	(1318)	960.0	(1411)
CF300-1850-01	350 MCM	1 x 185.0	1.06	(27.0)	1285.7	(1890)	1370.1	(2014)



### Chainflex® Shrink Sleeve

#### Technical Data (Heat-shrink sleeving only)

**Material:** Polyolefin particularly abrasion-resistant, high-flex blend, oil-resistant, coolant-resistant **Color:** green/yellow

**Permissible temperature range for continuous flexing:** -40°F to +275°F (-40°C to +135°C)

**Shrink temperature:** +248°F (+120 °C) min.

Part No.	Maximum Diameter Before Shrinking		Minimum Diameter After Shrinking	
	in.	(mm)	in.	(mm)
CGPT 9-5/4-8	.37	(9.5)	.19	(4.8)
CGPT 12-7/6-4	.50	(12.7)	.25	(6.4)
CGPT 19-0/9-5	.75	(19.0)	.37	(9.5)
CGPT 25-4/12-7	1.00	(25.4)	.50	(12.7)
CGPT 38-0/19-0	1.50	(38.0)	.75	(19.0)

NOTE: The mentioned external diameters are maximum values.

# TPE Power Cable

## Chainflex® CFPE

TPE Energy Chain® cable, oil-resistant, bio-oil-resistant, UV-resistant, flame retardant



CFPE

CLASS  
6.4.4

Price Index



### Construction

**Conductors:** Finely stranded bare copper wires, according to EN60882

**Conductor insulation:** Mechanically high quality TPE blend **Color:** green/yellow

**Overall jacket:** TPE Especially abrasion resistant, highly flexible mixture, oil resistant coolant resistant and UV resistant Silicone-free in compliance with PV 3.10.7 - status 1992. Color: Black

### Technical Data

**Minimum bending radius, moving:** 7.5 x outer cable diameter

**Minimum bending radius, fixed:** 4 x outer cable diameter

**Permissible temperature, moving:** -31°F to +194°F (-35°C to +90°C)

**Permissible temperature, fixed:** -40°F to +194°F (-40°C to +90°C)

**Voltage:** 1000V

**Testing voltage:** 4000V

**Oil resistance:** High

**UV resistance:** High

**Regulations: cRUus:** UL AWM style for USA & Canada: 21184 80°C 1000V **Flame Resistance:** FT1, CE, RoHS: 2002/95/EC; Please reference the Design Section (Chapter 1) for more information.

**Cleanroom:** According to ISO Class 1, material/cable tested by IPA according to standard 14644-1. Test cable

### Typical Applications

- for maximum mechanical load requirements
- indoor and outdoor applications, UV-resistant
- for unsupported and gliding travel up to 1312 ft (400m) or more
- storage and retrieval units for high-bay warehouses, machine tools, quick handling, cleanroom, semiconductor insertion, ship-to-shore, outdoor cranes, low temperature applications



**Conductor**  
Highly flexible special conductor

**Conductor insulation**  
Pressure extruded TPE blend

**Outer jacket**  
Pressure extruded, flame-retardant TPE blend

Part No.	AWG	No. of Conductors and Rated Cross-Section in mm <sup>2</sup>	Outer Diameter		Copper Index		Weight	
			in.	(mm)	lbs/mft	(kg/km)	lbs/mft	(kg/km)
CFPE-15-01	16	1 x 1.5	.20	(5.0)	10.2	(15)	24.0	(35)
CFPE-25-01	14	1 x 2.5	.22	(5.5)	17.0	(25)	31.0	(46)
CFPE-40-01	12	1 x 4.0	.24	(6.0)	25.5	(38)	41.0	(61)
CFPE-60-01	10	1 x 6.0	.30	(7.5)	37.6	(56)	54.4	(81)
CFPE-100-01	8	1 x 10.0	.32	(8.0)	64.5	(96)	83.0	(123)
CFPE-160-01	6	1 x 16.0	.37	(9.5)	101.5	(151)	128.3	(191)
CFPE-250-01	4	1 x 25.0	.45	(11.5)	161.0	(239)	195.5	(291)
CFPE-350-01	2	1 x 35.0	.51	(13.0)	227	(333)	263	(387)



No Minimum Order • No Cut Charges on up to 10 cuts of the same part number

10.149

CF310

igus®

# TPE Power Cable

CLASS  
6.4.4

Price Index



## Chainflex® CF310

TPE Energy Chain® cable, shielded, oil-resistant, bio-oil-resistant, UV-resistant, flame-retardant

**Conductor**  
Highly flexible  
special  
conductor

**Conductor  
insulation**  
Pressure  
extruded  
TPE blend

**Overall Shield**  
Highly flexible  
braided copper  
shield

**Outer jacket**  
Pressure  
extruded,  
TPE blend



### Construction

**Conductors:** Finely stranded bare copper wires, according to EN60882

**Conductor insulation:** Mechanically high quality TPE blend.

**Total shielding:** Tinned copper braid, 90% optical coverage

**Outer jacket:** TPE: particularly abrasion-resistant, high-flex blend, oil-resistant, coolant-resistant and UV-resistant. Silicon-free in compliance with PV 3.10.7 - status 1992. **Color:** black.

### Technical Data

**Minimum bending radius, moving:** 7.5 x outer cable diameter

**Minimum bending radius, fixed:** 4 x outer cable diameter

**Permissible temperature, moving:** -31°F to +194°F (-35°C to +90°C)

**Permissible temperature, fixed:** -40°F to +194°F (-40°C to +90°C)

**Voltage:** 1000 V

**Testing voltage:** 4000V

**Oil resistance:** High

**UV resistance:** High

**Regulations: cRUUs:** UL AWM style for USA & Canada: 21184 80°C 1000V **Flame Resistance:** FT1, CE, RoHS:

**2002/95/EC;** Please reference the Design Section (Chapter 1) for more information.

**Cleanroom:** According to ISO Class 1, material/cable tested by IPA according to standard 14644-1.

Test cable CF34-25-04

### Typical Applications

- for maximum mechanical load requirements
- indoor and outdoor applications, UV-resistant
- for unsupported and gliding travel up to 1312 ft (400m) or more
- storage and retrieval units for high-bay warehouses, machine tools, quick handling, cleanroom, semiconductor insertion, ship-to-shore, outdoor cranes, low temperature applications

Part No.	AWG	No. of Conductors and Rated Cross- Section in mm <sup>2</sup>	Outer Diameter (approx)		Copper Index		Weight	
			in.	(mm)	lbs/mft	(kg/km)	lbs/mft	(kg/km)
CF310-40-01	12	1 x 4.0	.26	(6.5)	37	(55)	50	(74)
CF310-60-01	10	1 x 6.0	.30	(7.5)	51	(75)	66	(97)
CF310-100-01	8	1 x 10.0	.34	(8.5)	82	(120)	98	(144)
CF310-160-01	6	1 x 16.0	.39	(10.0)	121	(178)	143	(210)
CF310-250-01	4	1 x 25.0	.45	(11.5)	185	(272)	214	(314)
CF310-350-01	2	1 x 35.0	.53	(13.5)	259	(380)	288	(423)
CF310-500-01	1	1 x 50.0	.59	(15)	357	(524)	386	(568)
CF310-700-01	2/0	1 x 70.0	.69	(17.5)	469	(689)	509	(748)
CF310-950-01	3/0	1 x 95.0	.81	(20.5)	626	(920)	678	(997)
CF310-1200-01	4/0	1 x 120.0	.87	(22)	776	(1140)	839	(1233)
CF310-1500-01	300 MCM	1 x 150.0	.94	(24)	977	(1436)	1054	(1549)
CF310-1850-01	350 MCM	1 x 185.0	1.04	(26.5)	1244	(1829)	1297	(1906)

NOTE: The mentioned external diameters are maximum values.



10.150

No Minimum Order • No Cut Charges on up to 10 cuts of the same part number

# TPE Power Cable

## Chainflex® CF BRAID

TPE Energy Chain® cable, shielded/unshielded, oil-resistant, bio-oil-resistant, UV-resistant, flame-retardant, hydrolysis-resistant and microbe-resistant



CF BRAID

Price Index



CLASS  
6.4.4

### Construction

**Conductors:** Finely stranded bare copper wires, according to EN60882

**Conductor insulation:** Mechanically high-quality TPE blend. According to DIN VDE 0207 Part 4.

**Cable core:** Conductors braided together to prevent corkscrew

**Inner jacket:** TPE blend, adapted to the requirements of the Energy Chain®.

**Overall shielding:** Tinned copper braid, coverage approx. 90% optical (for shielded types)

**Outer jacket:** Low-adhesion TPE blend, especially abrasion-resistant, high-flex blend, adapted to the requirements of the Energy Chain®. Silicon-free in compliance with PV 3.10.7 - status 1992. **Color:** black.

### Technical Data

**Minimum bending radius, moving:** 7.5 x outer cable diameter

**Minimum bending radius, fixed:** 4 x outer cable diameter

**Permissible temperature, moving:** -31°F to +158°F (-35°C to +70°C)

**Permissible temperature, fixed:** -40°F to +158°F (-40°C to +70°C)

**Voltage:** 1000 V

**Testing voltage:** 4000V

**Oil resistance:** High

**UV resistance:** High

**Regulations: cRUus:** UL AWM style for USA & Canada: 21184 80°C 1000V **Flame Resistance:** FT1, CE,

**RoHS: 2002/95/EC;** Please reference the Design Section (Chapter 1) for more information.

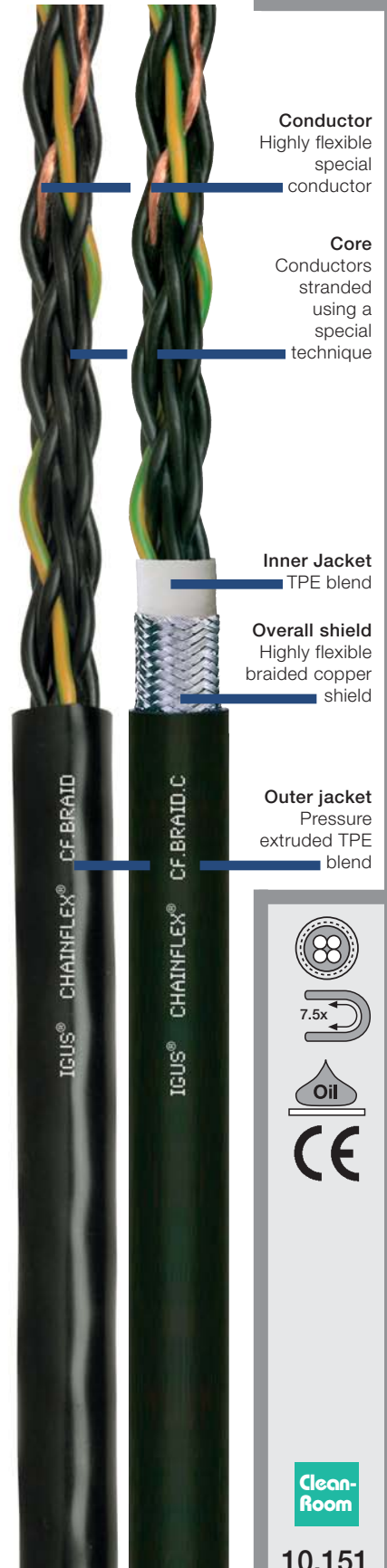
### Typical Applications

- for maximum load requirements
- indoor and outdoor applications, UV-resistant
- for unsupported and gliding travel up to 1312 ft (400m) or more
- storage and retrieval units for high-bay warehouses, quick handling, cleanroom, indoor and outdoor cranes, low temperature applications

Part No.	AWG	No. of Conductors and Rated Cross-Section in mm <sup>2</sup>	Outer Diameter (approx)		Copper Index		Weight	
			in.	(mm)	lbs/mft	(kg/km)	lbs/mft	(kg/km)
CFBRAID-25-08	14	8 G 2.5	.79	(20)	130.6	(192)	270.8	(398)
CFBRAID-25-08-C	14	(8 G 2.5) C	.93	(23.5)	217.7	(320)	425.2	(625)

**NOTE:** The mentioned external diameters are maximum values.

G = with gree-yellow earth core



# igupren Power Cable

## Chainflex® CFRANE

For maximum voltages and output, oil-resistant, UV-resistant, flame-retardant

CLASS  
6.4.3

Price Index



**Conductor**  
Highly flexible  
special  
conductor

**Core insulation**  
Extruded EPR  
insulation over  
conductive  
rubber

**Overall shield**  
Highly flexible  
copper shield

**Outer jacket**  
Extruded, highly  
abrasion-resistant  
iguprene blend



### Construction

**Conductors:** Highly flexible cable consisting of tinned copper wires

**Conductor insulation:** Inner secondary layer made of conductive rubber. Insulating sheath made of high-quality, heat-resistant and ozone-proof (free) ethylene propylene rubber (EPR). External semi-conducting layer made of conductive rubber

**Outer jacket:** Flame-retardant, oil-resistant rubber jacket made of iguprene for maximum mechanical stress.

### Technical Data

**Minimum bending radius, moving:** 10 x outer cable diameter

**Minimum bending radius, fixed:** 7.5 x outer cable diameter

**Permissible temperature, moving:** -4°F to +176°F (-20°C to +80°C)

**Permissible temperature, fixed:** -22°F to +176°F (-30°C to +80°C)

**Nominal voltage:** 6/10KV (other voltage upon inquiry)

**Oil resistance:** High

**UV resistance:** High

### Typical Applications

- for maximum mechanical load requirements
- indoor and outdoor applications, UV-resistant
- for freely suspended and gliding travel up to 1640 ft (500m) or more

Part No.	Center AWG/ Serve AWG	No. of Conductors and Rated Cross Section in mm <sup>2</sup>
CFCRANE 1x25/16	4 / 6	1 x 25/16
CFCRANE 1x35/16	2 / 6	1 x 35/16
CFCRANE 1x50/16	1 / 6	1 x 50/16
CFCRANE 1x70/16	2/0 / 6	1 x 70/16
CFCRANE 1x95/16	3/0 / 6	1 x 95/16

Part No.	Outer Diameter (approx)		Copper Index		Weight	
	in.	(mm)	lbs/mft	(kg/km)	lbs/mft	(kg/km)
CFCRANE 1x25/16	1.06	(27)	318.2	(468)	639.2	(940)
CFCRANE 1x35/16	1.14	(29)	391.7	(576)	754.8	(1110)
CFCRANE 1x50/16	1.18	(30)	484.2	(712)	918.0	(1350)
CFCRANE 1x70/16	1.26	(32)	620.2	(912)	1054.0	(1550)
CFCRANE 1x95/16	1.34	(34)	778.6	(1145)	1237.6	(1820)



# Grouping



CF AIR

## Chainflex® CF AIR

**PUR Energy Chain® air hose, oil-resistant, coolant-resistant, abrasion-resistant, outside toleranced\***

Price Index



### Description

igus® Chainflex® Air pneumatic hoses have been tested successfully in cable carriers through more than 10 million bending cycles, at bend radii below the recommended minimum. They are optimized for excellent flexibility and wear resistance in continuous-flex cable carrier applications. They are also very resistant to oils and coolants.

### Technical Data

**Material:** Polyurethane, optimized for the requirements of continuous flexing inside a cable carrier

**Color:** blue

**Operating pressure at +68°F (+20°C):** 150 psi (10 bar)

**Vacuum:** at +68°F (20°C) 28" Hg

**Minimum bending radius for flexible use:** 10 x outer hose diameter

**Temperature range, moving:** -13°F to +158°F (-25°C to +70°C)

**Temperature range, fixed:** -40°F to +158°F (-40°C to +70°C)

### Chainflex® Air - Metric Sizes

Part No.	Inner Diameter (approx)		Wall Thickness		Outer Diameter (approx)		Weight	
	in.	(mm)	in.	(mm)	in.	(mm)	lbs.mft	(kg/km)
CAPU-A-06-0	.16	(4)	.04	(1.0)	.24	(6)	12.9	(19)
CAPU-A-08-0	.22	(5.7)	.04	(1.0)	.31	(8)	20.4	(30)
CAPU-A-10-0	.28	(7)	.06	(1.4)	.39	(10)	32.6	(48)
CAPU-A-12-0	.31	(8)	.08	(1.9)	.47	(12)	51.7	(76)
CAPU-A-16-0	.43	(11)	.10	(2.4)	.63	(16)	86.4	(127)

### Chainflex® Air - Inch Sizes

Part No.	Inner Diameter (approx)		Wall Thickness		Outer Diameter (approx)		Weight	
	in.		in.		in.		lbs/mft	
CAPU-I-02	.16		.05		.25		15	
CAPU-I-03	.19		.06		.31		26	
CAPU-I-04	.25		.06		.38		32	
CAPU-I-06	.31		.09		.50		45	
CAPU-I-08	.41		.11		.63		58	

**Note:** Overall diameter tolerances  
 1/8" - 1/2" OD = ± .005  
 9/16" - 3/4" OD = ± .006



No Minimum Order • No Cut Charges on up to 10 cuts of the same part number