

EcoCable™ and EcoFlex™ Cable

Smaller. Lighter. Tougher. 100% Recyclable.



Total Performance, Completely Recyclable



EcoCable and EcoFlex cable are Alpha Wire's newest innovations in control cabling. A true engineering breakthrough, EcoCable and EcoFlex cable combine better performance with a minimum environmental impact. Each derives its advantages from modified polyphenylene ether (mPPE) jacketing and insulation. EcoCable is:

- 100% Recyclable
- Up to 47% smaller
- Up to 65% lighter
- Capable of handling temperatures extremes to -50°C
- Up to 87% lower outgassing

mPPE Insulation: All the Advantages in Smaller, Lighter Control Cable



Environmentally Friendly

EcoCable and EcoFlex cables contain no halogens, phthalates, or heavy metals. The mPPE thermoplastic insulation and jacketing can be easily recycled. They meet RoHS and WEEE requirements for the elimination of hazardous substances and recyclability.

Low Specific Gravity

The 1.03 specific gravity of mPPE is 25% to 40% lower than other insulation materials, such as PVC, polyethylene, and cross-linked polyethylene. Along with the reduced wall thickness, the low specific gravity yields significant weight savings of up to 65% with EcoCable.

Better Dielectric Strength

The superior dielectric properties of mPPE make a reduced wall thickness possible, while maintaining the same electrical properties as a thicker PVC control cable.

More Choice in EMI Protection

Alpha Wire offers EcoCable and EcoFlex cable in three shielding options to handle any electrical environment.

- Unshielded
- Foil Shielded
- SupraShield® Foil + Braid Shield

Superior Availability

EcoCable and EcoFlex cable are available from stock in most sizes and constructions, with put-ups as small as 100 feet. Alpha Wire provides same-day shipment and next-day delivery to practically anywhere in the world.

Visit www.alphawire.com/EcoGen to request free samples



Alpha Wire's next generation of eco-friendly, high-performance wire and cable, designed to provide better performance in a smaller package.

- EcoCable™
- EcoFlex™ Cable
- EcoWire™
- EcoWire™ Plus

Learn more about the new EcoGen family of products at www.alphawire.com/EcoGen

Properties	EcoCable	EcoFlex Cable
Diameter	Up to 47% smaller	Up to 32% smaller
Weight	65% lighter	55% lighter
Temperature Range	-50°C to 105°C	-40°C to 105°C static, -5°C to 105°C Flexing
Outgassing	87% lower	91% lower
Recyclability	100%	100%
Availability	100', 1000'	100', 1000'

EcoCable Specifications

Request free samples at www.alphawire.com/EcoCable



Materials

Conductors:
Stranded tin-plated copper
Insulation: mPPE
Jacket: mPPE, slate

Electrical

Voltage: 600 V

Bend Radius

6x

Physical and Mechanical

Temperature Range:
-50°C to 105°C

Availability

100 ft (30.5 m) and
1000 ft (305 m) lengths

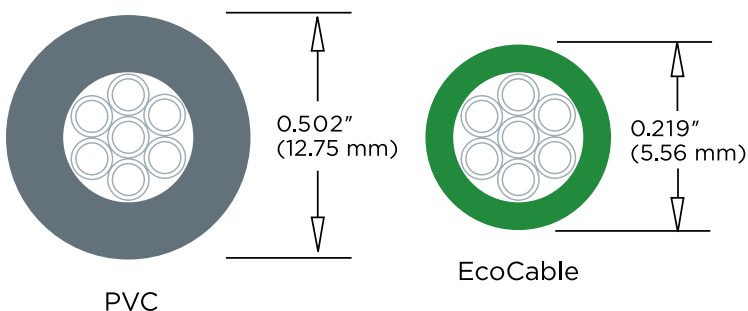
Approvals

- UL AWM 21270 (600 V, 105°C)
- UL VW-1
- CE
- CSA AWM I/II A/B
- RoHS Compliant
- REACH Compliant
- WEEE
- Suitable for use in NFPA 79 applications
- IEC 60332-2 Flame Behavior



Conductor No			
No.	Base Color	1st Stripe	2nd Stripe
1	Black		
2	Brown		
3	Red		
4	Orange		
5	Yellow		
6	Green		
7	Blue		
8	Violet		
9	Slate		
10	White		
11	White	Black	
12	White	Brown	
13	White	Red	
14	White	Orange	
15	White	Yellow	
16	White	Green	
17	White	Blue	
18	White	Violet	
19	White	Slate	
20	White	Black	Brown
21	White	Black	Red
22	White	Black	Orange
23	White	Black	Yellow
24	White	Black	Green
25	White	Black	Blue

22 AWG (0.35 mm²) Cable



EcoCable

Unshielded

24 AWG (0.28 mm²)

Stranding: 7/32 (0.20 mm²)
 Insulation thickness: 0.010 (0.25 mm)
 Jacket thickness: 0.032 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
77001	2	0.156	3.96
77002	4	0.175	4.44
77003	5	0.188	4.78
77004	7	0.201	5.11
77005	9	0.229	5.82
77006	19	0.288	7.32

22 AWG (0.35 mm²)

Stranding: 7/30 (0.25 mm²)
 Insulation thickness: 0.010 (0.25 mm)
 Jacket thickness: 0.032 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
77007	2	0.168	4.27
77008	4	0.189	4.80
77009	5	0.204	5.18
77010	7	0.219	5.56
77011	9	0.251	6.38
77012	19	0.318	8.08

20 AWG (0.56 mm²)

Stranding: 7/28 (0.32 mm²)
 Insulation thickness: 0.010 (0.25 mm)
 Jacket thickness: 0.032 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
77013	3	0.193	4.90
77014	4	0.209	5.31
77015	9	0.280	7.11
77016	12	0.309	7.85
77017	15	0.336	8.53
77018	19	0.358	9.09
77019	25	0.416	10.57

18 AWG (0.81 mm²)

Stranding: 16/30 (0.25 mm²)
 Insulation thickness: 0.010 (0.25 mm)
 Jacket thickness: 0.032 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
77020	2	0.202	5.13
77021	3	0.213	5.41
77022	4	0.230	5.84
77023	5	0.250	6.35
77024	7	0.271	6.88
77025	9	0.313	7.95
77026	12	0.346	8.79
77027	15	0.377	9.58
77028	19	0.404	10.26
77029	25	0.470	11.94

16 AWG (1.32 mm²)

Stranding: 19/0.0117 (0.297 mm²)
 Insulation thickness: 0.010 (0.25 mm)
 Jacket thickness: 0.032 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
77030	4	0.259	6.58
77031	5	0.283	7.19
77032	7	0.307	7.80
77033	9	0.357	9.07
77034	12	0.396	10.06
77035	15	0.433	11.00
77036	19	0.464	11.79
77037	25	0.542	13.77

14 AWG (2.08 mm²)

Stranding: 41/30 (0.25 mm²)
 Insulation thickness: 0.011 (0.28 mm)
 Jacket thickness: 0.032 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
77038	2	0.260	6.60
77039	3	0.275	6.98
77040	4	0.301	7.65
77041	5	0.329	8.36
77042	7	0.358	9.09
77043	9	0.419	10.64
77044	12	0.467	11.86
77045	15	0.511	12.98
77046	25	0.644	16.36

EcoCable Foil Shield

24 AWG (0.28 mm²)

Stranding: 7/32 (0.20 mm²)
Insulation thickness: 0.010 (0.25 mm)
Jacket thickness: 0.032 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
77102	2	0.255	6.48
77103	3	0.16	4.06
77104	4	0.167	4.24
77105	5	0.179	4.55
77106	7	0.192	4.88
77107	9	0.205	5.21
77101	12	0.233	5.92

18 AWG (0.81 mm²)

Stranding: 16/30 (0.25 mm²)
Insulation thickness: 0.010 (0.25 mm)
Jacket thickness: 0.032 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
77124	2	0.206	5.23
77126	3	0.217	5.51
77127	4	0.234	5.94
77128	5	0.254	6.45
77129	7	0.275	6.98
77130	9	0.317	8.05
77121	12	0.350	8.89
77122	15	0.381	9.68
77123	19	0.408	10.36
77125	25	0.474	12.04

22 AWG (0.35 mm²)

Stranding: 7/30 (0.25 mm²)
Insulation thickness: 0.010 (0.25 mm)
Jacket thickness: 0.032 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
77109	2	0.172	4.37
77110	3	0.180	4.57
77111	4	0.193	4.90
77112	5	0.208	5.28
77113	7	0.223	5.66
77114	9	0.255	6.48
77108	12	0.280	7.11

16 AWG (1.32 mm²)

Stranding: 19/0.0117 (0.297 mm²)
Insulation thickness: 0.010 (0.25 mm)
Jacket thickness: 0.032 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
77133	2	0.230	5.84
77134	3	0.242	6.15
77135	4	0.263	6.68
77136	5	0.287	7.29
77137	7	0.311	7.90
77138	9	0.361	9.17
77131	12	0.400	10.16
77132	15	0.437	11.10

20 AWG (0.56 mm²)

Stranding: 7/28 (0.32 mm²)
Insulation thickness: 0.010 (0.25 mm)
Jacket thickness: 0.032 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
77116	3	0.197	5.00
77117	4	0.213	5.41
77118	5	0.230	5.84
77119	7	0.247	6.27
77120	9	0.284	7.21
77115	12	0.313	7.95

14 AWG (2.08 mm²)

Stranding: 41/30 (0.25 mm²)
Insulation thickness: 0.011 (0.28 mm)
Jacket thickness: 0.032 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
77141	2	0.264	6.71
77142	3	0.279	7.09
77143	4	0.305	7.75
77144	5	0.333	8.46
77145	7	0.362	9.19
77146	9	0.423	10.74
77139	12	0.471	11.96
77140	15	0.515	13.08

EcoCable

Supra-Shield® Foil + Braid

24 AWG (0.28 mm²)

Stranding: 7/32 (0.20 mm²)
 Insulation thickness: 0.010 (0.25 mm)
 Jacket thickness: 0.032 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
77201	4	0.203	5.16
77202	7	0.229	5.82
77203	12	0.279	7.09

18 AWG (0.81 mm²)

Stranding: 16/30 (0.25 mm²)
 Insulation thickness: 0.010 (0.25 mm)
 Jacket thickness: 0.032 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
77213	2	0.230	5.84
77214	3	0.241	6.12
77215	4	0.258	6.55
77216	5	0.278	7.06
77217	7	0.299	7.59
77218	9	0.341	8.66
77219	12	0.374	9.50
77220	15	0.405	10.29
77221	19	0.432	10.97

22 AWG (0.35 mm²)

Stranding: 7/30 (0.25 mm²)
 Insulation thickness: 0.010 (0.25 mm)
 Jacket thickness: 0.032 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
77204	4	0.217	5.51
77205	7	0.247	6.27
77206	12	0.304	7.72

16 AWG (1.32 mm²)

Stranding: 19/0.0117 (0.297 mm²)
 Insulation thickness: 0.010 (0.25 mm)
 Jacket thickness: 0.032 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
77222	2	0.254	6.45
77223	3	0.266	6.76
77224	4	0.287	7.29
77225	5	0.311	7.90
77226	7	0.335	8.51
77227	9	0.385	9.78
77228	12	0.424	10.77
77229	15	0.461	11.71
77230	19	0.492	12.50

20 AWG (0.56 mm²)

Stranding: 7/28 (0.32 mm²)
 Insulation thickness: 0.010 (0.25 mm)
 Jacket thickness: 0.032 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
77207	4	0.237	6.02
77208	5	0.254	6.45
77209	7	0.271	6.88
77210	9	0.308	7.82
77211	12	0.337	8.56
77212	19	0.386	9.80

14 AWG (2.08 mm²)

Stranding: 41/30 (0.25 mm²)
 Insulation thickness: 0.011 (0.28 mm)
 Jacket thickness: 0.032 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
77231	2	0.288	7.32
77232	3	0.303	7.70
77233	4	0.329	8.36
77234	7	0.386	9.80
77235	9	0.447	11.35
77236	12	0.495	12.57
77237	15	0.539	13.69
77238	25	0.678	17.22

EcoFlex Cable Specifications

Request free samples at www.alphawire.com/EcoFlex



Materials

Conductors:

Stranded tin-plated copper

Insulation: mPPE

Jacket: mPPE, slate

Electrical

Voltage: 600 V

Bend Radius

Unshielded: 5x Static, 5x Flexing

Shielded: 6x Static, 8x Flexing

Physical and Mechanical

Temperature Range:

-40°C to 105°C

Availability

100 ft (30.5 m) and

1000 ft (305 m) lengths

Key Features

- Compact cable for moderate flex applications
- Rated for more than 1 million flex cycles
- Easier routing and handling

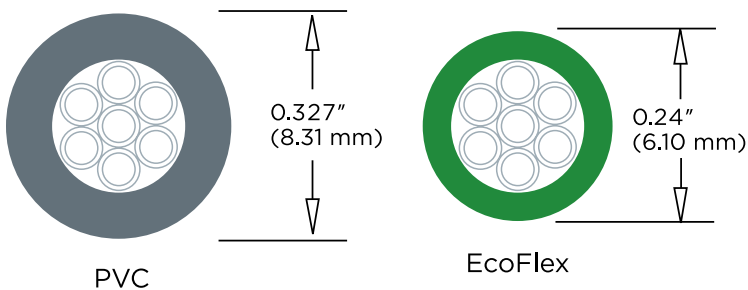
Approvals

- UL AWM 21819 (600 V, 105°C)
- UL AWM 21492 (300 V, 80°C)
- CE
- UL VW-1
- RoHS Compliant
- CSA AWM I/II A/B FT1
- REACH Compliant
- WEEE
- Suitable for use in NFPA79 Applications
- IEC 60332-2 Flame Behavior



Conductor No			
No.	Base Color	1st Stripe	2nd Stripe
1	Black		
2	Red		
3	White		
4	Green		
5	Orange		
6	Blue		
7	Brown		
8	Yellow		
9	Violet		
10	Slate		
11	Pink		
12	Tan		
13	Red	Green	
14	Red	Yellow	
15	Red	Black	
16	White	Black	
17	White	Red	
18	White	Green	
19	White	Yellow	
20	White	Blue	
21	White	Brown	
22	White	Orange	
23	White	Slate	
24	White	Violet	
25	White	Black	Red

20 AWG (0.51 mm²) Cable



EcoFlex Cable

Unshielded

20 AWG (0.51 mm²)

Stranding: 10/30 (0.25 mm²)
 Insulation thickness: 0.010 (0.25 mm)
 Jacket thickness: 0.035 (0.89 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
79001	2	0.184	4.67
79002	3	0.193	4.90
79003	4	0.207	5.26
79004	5	0.224	5.69
79005	7	0.240	6.10
79006	9	0.296	7.52
79007	12	0.303	7.70
79008	18	0.349	8.86

18 AWG (0.81 mm²)

Stranding: 16/30 (0.25 mm²)
 Insulation thickness: 0.010 (0.25 mm)
 Jacket thickness: 0.035 (0.89 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
79010	2	0.208	5.28
79011	3	0.219	5.56
79012	4	0.236	5.99
79013	5	0.256	6.50
79014	7	0.277	7.04
79015	9	0.344	8.74
79016	12	0.353	8.97
79017	18	0.411	10.44

16 AWG (1.32 mm²)

Stranding: 26/30 (0.25 mm²)
 Insulation thickness: 0.011 (0.28 mm)
 Jacket thickness: 0.035 (0.89 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
79019	2	0.236	5.99
79020	3	0.249	6.32
79021	4	0.270	6.86
79022	5	0.294	7.47
79023	7	0.319	8.10
79024	9	0.400	10.16
79025	12	0.411	10.44
79026	18	0.481	12.22

14 AWG (2.08 mm²)

Stranding: 41/30 (0.25 mm²)
 Insulation thickness: 0.011 (0.28 mm)
 Jacket thickness: 0.035 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
79028	2	0.266	6.76
79029	3	0.281	7.14
79030	4	0.307	7.80
79031	5	0.335	8.51
79032	7	0.364	9.25
79033	9	0.459	11.66
79034	12	0.473	12.01
79035	18	0.556	14.12

12 AWG (3.29 mm²)

Stranding: 65/30 (0.25 mm²)
 Insulation thickness: 0.012 (0.30 mm)
 Jacket thickness: 0.035 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
79037	3	0.326	8.28
79038	4	0.358	9.09
79039	5	0.392	9.96
79040	7	0.428	10.87

10 AWG (5.32 mm²)

Stranding: 105/30 (0.25 mm²)
 Insulation thickness: 0.012 (0.30 mm)
 Jacket thickness: 0.035 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
79041	3	0.38	9.65
79042	4	0.423	10.74
79043	5	0.465	11.81

EcoFlex Cable

Braid Shield

20 AWG (0.51 mm²)

Stranding: 10/30 (0.25 mm²)
 Insulation thickness: 0.010 (0.25 mm)
 Jacket thickness: 0.035 (0.89 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
79101	2	0.210	5.33
79102	3	0.219	5.56
79103	4	0.233	5.92
79104	5	0.250	6.35
79105	7	0.266	6.76
79106	9	0.321	8.15
79107	12	0.329	8.36
79108	18	0.376	9.55

18 AWG (0.81 mm²)

Stranding: 16/30 (0.25 mm²)
 Insulation thickness: 0.010 (0.25 mm)
 Jacket thickness: 0.035 (0.89 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
79109	2	0.236	5.99
79110	3	0.247	6.27
79111	4	0.264	6.71
79112	5	0.284	7.21
79113	7	0.305	7.75
79114	9	0.372	9.45
79115	12	0.381	9.68

16 AWG (1.32 mm²)

Stranding: 26/30 (0.25 mm²)
 Insulation thickness: 0.011 (0.28 mm)
 Jacket thickness: 0.035 (0.89 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
79116	2	0.262	6.65
79117	3	0.275	6.98
79118	4	0.396	10.06
79119	5	0.320	8.13
79120	7	0.345	8.76

14 AWG (2.08 mm²)

Stranding: 41/30 (0.25 mm²)
 Insulation thickness: 0.011 (0.28 mm)
 Jacket thickness: 0.035 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
79121	2	0.294	7.47
79122	3	0.309	7.85
79123	4	0.335	8.51
79124	5	0.363	9.22
79125	7	0.392	9.96

12 AWG (3.29 mm²)

Stranding: 65/30 (0.25 mm²)
 Insulation thickness: 0.012 (0.30 mm)
 Jacket thickness: 0.035 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
79126	3	0.354	8.99
79127	4	0.386	9.80

EcoFlex Cable

Supra-Shield® Foil + Braid

20 AWG (0.51 mm²)

Stranding: 10/30 (0.25 mm²)
 Insulation thickness: 0.010 (0.25 mm)
 Jacket thickness: 0.035 (0.89 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
79201	2	0.216	5.49
79202	3	0.225	5.72
79203	4	0.239	6.07
79204	5	0.256	6.50
79205	7	0.272	6.91
79206	9	0.328	8.33
79207	12	0.335	8.51
79208	18	0.382	9.70

18 AWG (0.81 mm²)

Stranding: 16/30 (0.25 mm²)
 Insulation thickness: 0.010 (0.25 mm)
 Jacket thickness: 0.035 (0.89 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
79210	2	0.242	6.15
79211	3	0.253	6.43
79212	4	0.270	6.86
79213	5	0.290	7.37
79214	7	0.311	7.90
79215	9	0.378	9.60
79216	12	0.387	9.83
79217	18	0.445	11.30

16 AWG (1.32 mm²)

Stranding: 26/30 (0.25 mm²)
 Insulation thickness: 0.011 (0.28 mm)
 Jacket thickness: 0.035 (0.89 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
79218	2	0.268	6.81
79219	3	0.281	7.14
79220	4	0.302	7.67
79221	5	0.326	8.28
79222	7	0.351	8.92
79223	9	0.432	10.97
79224	12	0.443	11.25

14 AWG (2.08 mm²)

Stranding: 41/30 (0.25 mm²)
 Insulation thickness: 0.011 (0.28 mm)
 Jacket thickness: 0.035 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
79225	2	0.300	7.62
79226	3	0.315	8.00
79227	4	0.341	8.66
79228	5	0.369	9.37
79229	7	0.398	10.11
79230	9	0.493	12.52
79231	12	0.507	12.88

12 AWG (3.29 mm²)

Stranding: 65/30 (0.25 mm²)
 Insulation thickness: 0.012 (0.30 mm)
 Jacket thickness: 0.035 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
79232	3	0.360	9.14
79233	4	0.391	9.93
79234	5	0.426	10.82
79235	7	0.462	11.73

10 AWG (5.32 mm²)

Stranding: 105/30 (0.25 mm²)
 Insulation thickness: 0.012 (0.30 mm)
 Jacket thickness: 0.035 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
79236	3	0.419	10.64
79237	4	0.457	11.61

Cables you trust. Service you deserve.

Every application is critical and cable failure is not an option when the safety of your equipment and personnel is paramount. Specify Alpha products since the integrity of your system is only as robust as the products you use.

Superior availability

Alpha offers wire and cable from stock in most sizes and constructions, in both small and large put-ups, so you can order it when you need it. Our products are available for same-day shipment, eliminating long lead times.

Service and support, second-to-none

Selecting the correct cable for your critical application is essential to overall system reliability, performance, and safety. So we make it easy for you select the right Alpha product for your specific application. Our online resources include a wire and cable selection guide, technical information, full product catalog, and a distributor locator to make it easy to select and get the wire or cable you need. Can't find what you're looking for? Design the cable to your specification. It's easy, just visit **www.alphawire.com**!

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