

# EcoFlex™ Cable

Smaller. Lighter. Tougher. 100% Recyclable.





## Total Performance, Completely Recyclable

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

- 100% Recyclable
- Up to 32% smaller
- Up to 55% lighter
- Capable of handling temperatures extremes to  $-40^{\circ}\text{C}$
- Up to 91% lower outgassing
- Rated for over 1 million flex cycles

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



## Environmentally Friendly

EcoFlex cable contains 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 55% with EcoFlex cable.

## 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 EcoFlex cable in three shielding options to handle any electrical environment.

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

## Superior Availability

EcoFlex cables 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](http://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](http://www.alphawire.com/EcoGen)

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





# EcoFlex Cable Specifications

Request free samples at [www.alphawire.com/EcoFlex](http://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

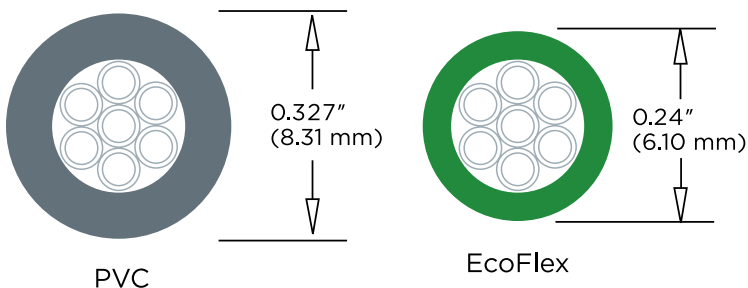
## Approvals

- 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 mm<sup>2</sup>) Cable



# EcoFlex Cable

## Unshielded

### 28 AWG (0.09 mm<sup>2</sup>)

Stranding: 7/36 (7 x 0.13 mm)  
 Insulation thickness: 0.010 (0.25 mm)  
 Jacket thickness: 0.035 (0.89 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
<b>79061</b>	2	0.142	3.61
<b>79062</b>	3	0.147	3.73

### 24 AWG (0.24 mm<sup>2</sup>)

Stranding: 19/36 (19 x 0.13 mm)  
 Insulation thickness: 0.010 (0.25 mm)  
 Jacket thickness: 0.035 (0.89 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
<b>79050</b>	2	0.162	4.11
<b>79051</b>	3	0.169	4.29
<b>79052</b>	4	0.181	4.60
<b>79053</b>	6	0.207	5.26
<b>79054</b>	8	0.238	6.05
<b>79055</b>	10	0.257	6.53

### 26 AWG (0.14 mm<sup>2</sup>)

Stranding: 7/34 (7 x 0.16 mm)  
 Insulation thickness: 0.010 (0.25 mm)  
 Jacket thickness: 0.035 (0.89 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
<b>79056</b>	2	0.150	3.81
<b>79057</b>	3	0.156	3.96
<b>79058</b>	4	0.166	4.22
<b>79059</b>	6	0.189	4.80
<b>79060</b>	8	0.216	5.49

### 22 AWG (0.38 mm<sup>2</sup>)

Stranding: 19/34 (19 x 0.16 mm)  
 Insulation thickness: 0.010 (0.25 mm)  
 Jacket thickness: 0.035 (0.89 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
<b>79044</b>	2	0.176	4.47
<b>79045</b>	3	0.184	4.67
<b>79046</b>	4	0.198	5.03
<b>79047</b>	6	0.228	5.79
<b>79048</b>	8	0.264	6.71
<b>79049</b>	10	0.286	7.26

### 20 AWG (0.51 mm<sup>2</sup>)

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

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

# EcoFlex Cable

## Unshielded

### 18 AWG (0.81 mm<sup>2</sup>)

Stranding: 16/30 (16 x 0.25 mm)  
 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 mm<sup>2</sup>)

Stranding: 26/30 (26 x 0.25 mm)  
 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 mm<sup>2</sup>)

Stranding: 41/30 (41 x 0.25 mm)  
 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 mm<sup>2</sup>)

Stranding: 65/30 (65 x 0.25 mm)  
 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 mm<sup>2</sup>)

Stranding: 105/30 (105 x 0.25 mm)  
 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 mm<sup>2</sup>)

Stranding: 10/30 (10 x 0.25 mm)  
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 mm<sup>2</sup>)

Stranding: 16/30 (16 x 0.25 mm)  
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 mm<sup>2</sup>)

Stranding: 26/30 (26 x 0.25 mm)  
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 mm<sup>2</sup>)

Stranding: 41/30 (41 x 0.25 mm)  
Insulation thickness: 0.011 (0.28 mm)  
Jacket thickness: 0.035 (0.89 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 mm<sup>2</sup>)

Stranding: 65/30 (65 x 0.25 mm)  
Insulation thickness: 0.012 (0.30 mm)  
Jacket thickness: 0.035 (0.89 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

### 28 AWG (0.09 mm<sup>2</sup>)

Stranding: 7/36 (7 x 0.13 mm)  
 Insulation thickness: 0.010 (0.25 mm)  
 Jacket thickness: 0.035 (0.89 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
79261	2	0.174	4.42
79262	3	0.179	4.55

### 22 AWG (0.38 mm<sup>2</sup>)

Stranding: 19/34 (19 x 0.16 mm)  
 Insulation thickness: 0.010 (0.25 mm)  
 Jacket thickness: 0.035 (0.89 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
79244	2	0.208	5.28
79245	3	0.216	5.49
79246	4	0.23	5.84
79247	6	0.26	6.60
79248	8	0.296	7.52
79249	10	0.318	8.08

### 26 AWG (0.14 mm<sup>2</sup>)

Stranding: 7/34 (7 x 0.16 mm)  
 Insulation thickness: 0.010 (0.25 mm)  
 Jacket thickness: 0.035 (0.89 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
79256	2	0.182	4.62
79257	3	0.188	4.78
79258	4	0.198	5.03
79259	6	0.221	5.61
79260	8	0.248	6.30

### 20 AWG (0.51 mm<sup>2</sup>)

Stranding: 10/30 (10 x 0.25 mm)  
 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

### 24 AWG (0.24 mm<sup>2</sup>)

Stranding: 19/36 (19 x 0.13 mm)  
 Insulation thickness: 0.011 (0.25 mm)  
 Jacket thickness: 0.035 (0.89 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
79250	2	0.194	4.93
79251	3	0.201	5.11
79252	4	0.213	5.41
79253	6	0.239	6.07
79254	8	0.27	6.86
79255	10	0.289	7.34

# EcoFlex Cable

## Supra-Shield® Foil + Braid

### 18 AWG (0.81 mm<sup>2</sup>)

Stranding: 16/30 (16 x 0.25 mm)  
 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 mm<sup>2</sup>)

Stranding: 26/30 (26 x 0.25 mm)  
 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 mm<sup>2</sup>)

Stranding: 41/30 (41 x 0.25 mm)  
 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 mm<sup>2</sup>)

Stranding: 65/30 (65 x 0.25 mm)  
 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 mm<sup>2</sup>)

Stranding: 105/30 (105 x 0.25 mm)  
 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](http://www.alphawire.com)**

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

