

FAQ: EcoCable & EcoFlex

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How come MPPE cables are so much smaller than PVC cables but can still be rated 600V?

MPPE has a better dielectric strength than PVC, therefore it can handle the same voltage as a PVC cable while having a thinner wall than a PVC cable would.

Other than flexing, what is the difference between EcoCable and EcoFlex?

EcoCable is designed for static applications that require a smaller or lighter or more environmentally friendly product. EcoFlex is designed for applications that we require the cable to be able to move or that needs extended runs.

Can EcoCable or EcoFlex be used for outdoor applications? Are they sunlight resistant?

Neither EcoCable nor EcoFlex are designed for outdoor use. They do not have the water and sunlight resistance required for these types of applications.

Do EcoCable or EcoFlex have radiation resistance?

Neither EcoCable nor EcoFlex have been tested for radiation resistance. We don't recommend them for use in applications that require radiation resistance.

What is mPPE?

MPPE is a modified polyphenylene ether thermoplastic that is inherently lighter and tougher than PVC. The non-halogenated insulation contains no heavy metal pigments, allowing it to help manufacturers to meet Waste Electrical and Electronic Equipment (WEEE) requirements.

What is WEEE?

The Waste Electrical and Electronic Equipment Directive (WEEE Directive) is the European Community Directive 2002/96/EC on waste electrical and electronic equipment which, together with the Restriction of Hazardous Substances (RoHS) Directive 2002/95/EC, became European Law in February 2003. This directive sets collection, recycling and recovery targets for all types of electrical goods.

The WEEE Directive requires that only the producers of final products complete a WEEE registration. Alpha Wire is a component manufacturer, not a manufacturer of final products. Due to this, Alpha Wire does not require a WEEE registration to place our products on the European Union market.

Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product.

What are halogens?

Halogens are elements such as fluorine, chlorine, bromine, and iodine. Halogens are highly reactive and can be harmful to people and animals. Common cable insulations, such as PVC,

contain high amounts of halogens. The C in PVC is *chloride*, which is an ion of chlorine. PVC contains about 29% chlorine by weight. Teflon® FEP and PTFE contains about up to 76% fluorine. Teflon, when burned, produces toxic acid.

Halogens, under normal circumstances, are very stable and present no danger. Problems arise when they burn.

A halogen-containing plastic can release hydrogen chloride, hydrogen fluoride, and other dangerous gases when burned. When hydrogen chloride comes in contact with water, it forms hydrochloric acid, which is also dangerous. Beyond beginning toxic to humans and animals, these gases are also highly corrosive to metal.

The concern, then, with common wire and cable insulating materials is that they will emit toxic gases and toxic smoke. These gases become even more harmful when mixed with water, like from a sprinkler system, creating toxic acids.

What is Outgassing and why is low outgassing a benefit?

Outgassing (also known as offgassing) is the release of a gas that was dissolved, trapped, frozen or absorbed in some materials. Outgassing can potentially condense on equipment components, impeding function. Therefore applications, like Aerospace and semiconductor, which involve sensitive electronic equipment benefit from choosing products with lower outgassing characteristics.

Outgassing is measured in terms of percent of Total Mass Loss (TML) and percentage of Collected Volatile Condensable Material (CVCM). Nasa’s definition of low outgassing is materials having a TML of 1.0 % or Less and a CVCM of 0.10 % or Less. While neither of the products meet NASA’s definition of low outgassing, they are much lower than PVC.

Material	TML%	CVCM%	% Improved from PVC TML	% Improved from PVC CVCM
EcoCable Insulation	3.05%	1.26%	80%	87%
EcoCable Jacket	2.32%	1.14%	85%	89%
EcoFlex Insulation	1.95%	0.84%	87%	92%
EcoFlex Jacket	1.82%	0.34%	88%	97%
Average PVC	15.49%	10.03%		

EcoFlex has two different AWM styles on the product. Why?

EcoFlex has two different AWM styles on it so that it can be used for two different types of UL applications. The AWM 21819 provides a 105C UL temperature rating and a 600V UL voltage rating; however the cable can only be used for internal interconnect under this style. The AWM

21492 is UL 80C and 300V; however, it allows the cable to be used in external interconnect. This makes EcoFlex suitable for use in NFPA 79 applications.

Are EcoCable and EcoFlex UL listed/recognized?

Both EcoCable and EcoFlex are UL recognized for up to 105C and 600V.

Are EcoCable and EcoFlex CSA listed/recognized?

Both EcoCable and EcoFlex are CSA recognized for up to 105C and 600V.

What are the flex characteristics of EcoFlex?

EcoFlex is rated for approximately 1 million cycles. In addition to being a flexing cable, the MPPE material used on this cable is very flexible.

Do EcoCable and EcoFlex have CE approval?

Yes. EcoCable and EcoFlex are CE under the LVD 73/23/EEC Amendment 93/68/EEC.

How can EcoCable and Ecoflex be recycled? Are they going to biodegrade?

Neither EcoCable nor EcoFlex will biodegrade. MPPE can be regrinded and reused without needing to add fresh compound. The same material can be extruded again and again and its electrical properties won't degrade.

What put ups are available and what is the minimum order quantity?

Both EcoCable and EcoFlex are available in 100ft and 1000ft put ups and there is no minimum for the put ups. EcoFlex is also available in bulk with a 1000ft minimum.

What customizations are available for EcoCable?

EcoCable specials can be provided at a 1,000ft minimum. Below is a list of the customizations that can be made:

- Number of conductors (or pairs)
- Jacket or insulation colors
- AWG Sizes (only 28awg to 10awg)

Note: Cannot offer individually shielded pairs at this time

What customizations are available for EcoFlex?

EcoFlex specials can be provided at a 5,000ft minimum. Below is a list of the customizations that can be made:

- Number of conductors

- Jacket (except Black) or insulation colors
- AWG Sizes (only 28awg to 12awg)

What is the process for post Launch EcoCable & EcoFlex Sample Requests?

<http://www.alphawire.com/en/OnlineTools/SampleRequest>