

## E Path

### Türk Prysmian Kablo ve Sistemleri A.Ş.

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## 1. E Path

Energy and telecom cables are used everywhere, and there is an increase in cable production each passing day with the developing technology. In order to meet this increasing production demand, factories work non-stop and therefore high amounts of carbon emissions are released. To prevent this, manufacturers make great efforts to limit the emissions arising from the production of the necessary raw materials and cables to the testing process of the produced cables. Today, there is a significant need for environmentally sustainable strategies, and the need for environmentally friendly products is increasing each passing day.

In the cable industry, Prysmian, developed the E Path label system to evaluate the contribution of cables in terms of the impact of the climate change and to offer environmentally friendly solutions. With the E Path label, products will be able to have a green label that can be approved in the cable industry. E Path come to the forefront as an important step towards increasing sustainability and environmental awareness in the cable industry.

## 2. About E Path

Products with the E Path label are the first green-labeled products in the cable industry based on measurable and accepted sustainability criteria that are compatible with the European Union Eco-label Regulation No. 66/2010 on the principles of **sustainability, reliability, and quality**.

## 3. E Path Criterias

The classification system is based on criteria that are easy to apply, measurable, reliable, and recognized. These criteria apply to all businesses, products, and countries and are compatible with major regulatory frameworks and requirements such as the EU Eco-label. To get the E Path label, each cable family must go through a rating process based on 6 different criteria that examine carbon footprint, recyclability / circularity, recycling input rate, environmental benefits, cable transmission efficiency, and the presence of environmentally hazardous substances.

### 3.1. Carbon Footprint

This criterion aims to determine the effects of climate change resulting from the life cycle of cables. Based on "ISO 14067:2018 - Product Carbon Footprint Standard", the carbon footprint created by the product throughout the product life cycle is calculated accordingly.

"ISO 14067:2018 - Product Carbon Footprint Standard" is a standard to provide reliability for calculating direct and indirect greenhouse gas emissions resulting from the production, transportation, and disposal of the product and for determining the amount of reduction.

### 3.2. Toxic Substances

There should be no toxic or environmentally hazardous substances such as carcinogenic and mutagenic. Based on REACH and RoSH regulations, the presence of Carcinogenic, Mutagenic, Reprotoxic (CMR), or toxic/environmentally hazardous substances in the cable is prevented.

Within the scope of the REACH (Registration, Evaluation, Authorization, and Restriction of Chemicals) Regulation, all companies operating in the European Union member states and producing or importing more than one ton of chemicals per year must register such chemicals in a central database managed by the European Chemicals Agency (ECHA).

On the other hand, RoHS (Restriction of Hazardous Substances Directive) restricts the use of some hazardous substances in the production of various electronic and electrical equipment.

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### 3.3. Recyclability / Circularity

This criterion draws attention to the recycling potential of the materials used in cable production and means the possibility of including the products in recycling and recovery processes at the end of their life.

Recycling and reuse lead to various benefits, such as reducing raw material consumption and waste generation. The recyclability index is calculated for all other materials in the final product delivered to the customer.

Thus, it is aimed to use resources more efficiently and reduce environmental impacts by focusing on the recycling and recovery of materials used in cables. The ISO 15270:2008 standard is taken as a basis to evaluate this criterion.

### 3.4. Recycling Input Rate

It represents the presence of recycled materials, both outsourced and reused by Prysmian, in a cable. The ISO 15270:2008 standard is taken as a basis to evaluate this criterion. As an evaluation criterion, it is required that the product be optimally made of "10% recycled" material.

Recycling methods include the reintegration of recycled materials as "secondary raw materials" and are basically divided into two:

**3.4.1. Recycled material can be reused, possibly mixed with virgin raw material, to produce the same type of products that generate waste.**

**3.4.2. It means that the produced material is reused in the manufacture of different products but consists of the same materials. This emphasizes the circularity approach in the cable industry.**

### 3.5. Environmental Benefits

This criterion is linked to environmental benefits, i.e. environmental benefits resulting from the use of low-carbon products and products compliant with CPR (Construction Products Regulation). The EN 50575 standard, which is the extension of CPR in the cable industry, specifies which fire reaction performance must meet which criteria. It also requires fire performance declarations and CE-marking of cables used in buildings. Accordingly, the materials used in halogen-free cables do not contain any of the elements of fluorine, chlorine, bromine, and iodine and do not produce, during fire, toxic and corrosive gases that are harmful to the environment and human health. The environmental benefits criterion is evaluated based on the CPR class according to the Climate Bonds Initiative (CBI) Taxonomy and EN 50575 A1/2016.

### 3.6. Cable Transmission Efficiency

Cable transmission efficiency (performance) contributes to defining product sustainability. Cable efficiency relates to the losses occurring throughout its entire life cycle, and the losses are largely due to the joule effect in the conductor during current transmission. While these losses are losses such as voltage drop in power cables, they may be related to the propagation or scattering of light within the core for fiber optic cables. To prevent such losses in your cable projects, conductor cross-section calculation is one of the most important factors. Compared to the transmitted power, the lower the joule (J) losses, the higher the efficiency and the more sustainable the performance.

Using the European Union eco-label criteria as a reference, Prysmian created a "common language" for environmentally friendly best practices throughout the supply chain and became the first cable manufacturer to develop E Path which is a registered eco-labeling system based on the EU eco-label criteria, with a commitment to offer environmentally friendly cables to its customers. The implementation of this system aims to ensure that environmentally friendly products are identified more easily and that quality, reliable, and sustainable cables are offered in line with customer demands.

## 4. Conclusion

Prysmian, by referencing the European Union eco-label criteria, has created a 'common language' for the best environmental practices throughout the supply chain and has become the first cable manufacturer to develop a proprietary eco-labeling system called E Path, based on the EU eco-label criteria, with a commitment to offering environmentally friendly cables to its customers. The implementation of this system aims to facilitate the identification of eco-friendly products and to provide high-quality, reliable, and sustainable cables that meet customer demands.

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