PLASTIC MATERIAL, HOW BAD IS IT REALLY?

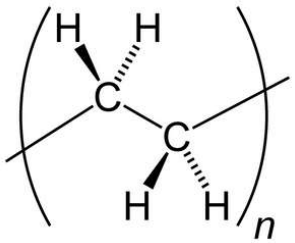
BY.FAUX

BACKGROUND

There are both harmless and risky plastics around us. Offering a product made of plastic, in this case plant walls made of polyethylene, certainly evokes emotions. Many today are afraid to use plastics, and to some extent wrongfully so. To know which types of plastic and plastic products we as consumers dare to choose, and which we should stay away from, we have delved into studies, reports and advice from the Swedish Environmental Protection Agency. Because we mustn't forget that plastic is a fantastic product. Unfortunately, we as humans have been bad at taking care of plastic waste when we're done with the product, and that's the core issue. Let's talk more about what ours plant walls are made of.

POLYETHYLENE (PE)

PE is a versatile material, transparent or semi-transparent, with good thermostability (it can handle temperatures as low as -60 °C). It can be made into both hard and soft products. Depending on the material density, PE is typically divided into different groups. PE can be found in the coatings of milk cartons, the covers of electric cables, storage containers, coat hangers, the handles of dishwashing brushes, and more.



Polyethylene is by far the most common type of consumer plastic, used in many everyday products. It's a thermoplastic material, which means that it can be melted into a liquid and then be cooled down to be moulded into a new solid material, over and over again. Various processing conditions lead to different qualities in the material, which can be used for many different purposes.

POLYETHYLENE (PE)

One of the most attractive qualities of polyethylene is its durability. It's highly resistant against bleaching and chipping, while also being impenetrable by many chemical substances, like acids and caustic solutions. PE is also great for electric isolation. It maintains its qualities under extremely cold conditions, but can melt at high temperatures.

Most important, however, according to the Swedish Environmental Protection Agency, is that polyethylene is a harmless plastic, assuming no harmful substances have been added (for example halogenated flame retardants in electronic products).

Polyethylene is weather resistant but can become brittle when exposed to sunlight for extended periods. This limitation can be overcome by adding UV stabilizers, something we have done with our plant walls.

THE LIFE EXPECTANCY OF POLYETHYLENE

How long is a string? The life expectancy of protects made of PE is very long. As an example, The Plastics Pipe Institute Inc. in the US have published a study that shows that municipality water pipes made of PE have a life expectancy of 100 years. External factors will of course affect this, as well as how the product is being used. Another example that demonstrates this is large tanks made of PE containing various types of chemicals, which consequently have an expected life expectancy of 15-20 years.

RECYCLING

Plastic products have received a bad reputation for their affects on the environment, but like most potential pollutants it is the behaviour of humans – not the product itself – that causes harm to the environment. Polyethylene is not biodegradable, which means it's not a material suitable to expose of at the landfill.

Qualities in polyethylene, however, does make it a suitable material for recycling, because it can be melted down and reshaped to a different product. Its resistance to chemical contamination and absorption of fluids also means that the recycled product won't contain many pollutants.
Other plastics that we use daily, in anything from food packaging, to clothes, toys, kitchen items, etc, include PVC, PET and Polyamid.