Bioplastics: Only certified products help

Biodegradability of plastic bags requires a careful and responsible presentation

A study by the University of Plymouth (UK) has raised concerns over the viability of biodegradable plastics. As the world market leader in certification of biodegradable plastics, TÜV AUSTRIA has reviewed said paper to clarify its findings and prevent misconceptions about biodegradability in general.

Executive Summary

TÜV AUSTRIA stresses that none of the bags evaluated by the Plymouth study have been evaluated or certified by an independent third party. Nor do these bags bear a mark of conformity, such as OK compost or OK biodegradable.

The results of the Plymouth study are in line with expectations. Most of the bags are almost intact after three years. Either the claims made by the manufacturers are false or the samples have been exposed to an environment they were not designed for.

Unlike the study itself, media reviewing the study are far less nuanced to the point of instilling mistrust in genuinely biodegradable products.

The Plymouth study´s conclusions are in line with the TÜV AUSTRIA OK compost approach:
- only an assessment sanctioned by a certificate issued by a competent and independent certification body guarantees the biodegradability / compostability of a product;

- controlled use of appropriate logos allows consumers to properly sort products at end of life.

Learn more about TÜV AUSTRIA OK compost at www.okcompost.org and on You Tube: www.tuv.at/okcompost-video

The University of Plymouth study

Five types of carrier bags were tested. One was made of polyethylene (PE), one was referred to as “biodegradable”, another as “compostable”, while the last two were made from oxo-fragmentable material. Oxo-fragmentable material is by its very definition not biodegradable and only erroneously described as such.

Following an exposure of these bags to different environments (soil, sea water and air) for a period of 3 years, the University of Plymouth analysed their mechanical characteristics, in particular tensile strength.

This method determines the degradation of the bags, even if that degradation is not due to bio organisms as it is in case of biodegradation. The title of the study is therefore perfectly correct: “*Environmental Deterioration of Biodegradable, Oxo-biodegradable, Compostable, and Conventional Plastic Carrier Bags in the Sea, Soil, and Open-Air Over a 3-Year Period* “

Superficial media reports

The results the study provides are in line with expectations: most of the bags are almost intact after three years, either because the claims made by the manufacturers are false, or the bags have been exposed to an environment they were not designed for.

However, it is unfortunate that the articles feature headlines that are less nuanced than the study itself. The superficial discussion of a complex and important matter creates confusion to the point of instilling distrust in genuinely biodegradable products.

It should be noted that none of these bags have been evaluated or certified by an independent third party, nor do they bear a mark of conformity (such as OK compost, OK biodegradable or other).

All our certification schemes are developed for a specific environment and the associated logo clearly mentions this environment in order to help the consumer in his sorting process.

The "compostable" bag tested during the study shows a marking referring to the European standard EN 13432, which is of no help for citizens.

For example, our OK compost HOME logo, which is only allowed on certified bags, clearly indicates that the bags are certified and intended for home composting.

Plymouth study in line with TÜV AUSTRIA approach

The conclusions the Plymouth study arrives at are perfectly in line with the TÜV AUSTRIA approach:

- only an assessment sanctioned by a certificate issued by a competent and independent certification body guarantees the biodegradability / compostability of a product;

- controlled use of appropriate logos allows consumers to properly sort products at end of life.

These are the two missions that we have been pursuing for almost 25 years via our OK compost and OK biodegradable conformity marks, adapted for different environments (industrial or domestic compost, biodegradation in soil, in water or at sea) and combined with permanent market monitoring.

Biodegradability requires careful and responsible presentation

TÜV AUSTRIA underlines that biodegradability must never be an excuse for littering. Biodegradability is an important subject matter that requires careful and responsible presentation to be implemented for the intended benefit of our environment.
Learn more about TÜV AUSTRIA OK compost at www.okcompost.org and on You Tube: www.tuv.at/okcompost-video