# Biodegradable

Scientifically proven plastic technology

d<sub>2</sub>w is a masterbatch technology which turns ordinary plastic, at the end of its useful life, in the presence of oxygen, into a material with a different molecular structure.

At the end of the process, it is no longer a plastic, and has changed into a material which is biodegradable, by bacteria and fungi, in the open environment.

With over 20 years of scientific research behind it, d<sub>2</sub>w biodegradable technology is perfect to use with most types of single-use plastics, bags, packaging films and bottles.





## Tested to the following international standard:

**ASTM D6954** 

### Complies with:

British Standard: BS 8472 French Accord: T51-808 Saudi Standard: SASO 2879 UAE Standard: 5009:2009

Mexican Standard: NMXE-E-288-NYCE

Scan the QR code to see d<sub>2</sub>w in action:





# **Biodegradable**

### Scientifically proven plastic technology



### The life cycle of plastic products enhanced with d<sub>2</sub>w biodegradable technology



Only 1% of d<sub>2</sub>w masterbatch is added to regular plastic at the manufacturing stage



Products and packaging made with d<sub>2</sub>w look and feel like regular plastic



They can be recycled if collected - but if they escape into the open environment



Sunlight and Oxygen will help to convert the plastic into biodegradable materials

### Without leaving toxic residues or microplastics behind.

#### Stages of biodegradation with d<sub>2</sub>w® technology:

- 1. d<sub>2</sub>w® masterbatch is added at the manufacturing stage.
- **2.** Film containing d<sub>2</sub>w® is extruded and then converted into bags or packaging.
- **3.** The product behaves like conventional plastic during its intended service life.
- **4.** After its service life, the bag or packaging may end up in the open environment.
- **5.** The d<sub>2</sub>w® then takes effect and the product begins to degrade in the presence of oxygen.
- **6.** The product will degrade and biodegrade in a continuous, and irreversible process, leaving nothing but carbon dioxide, water and humus.

Straws



**Coffee Pods** 



**Bread Bags** 

#### Added Value with d<sub>2</sub>w®

- · Only 1% inclusion rate.
- · Works with virgin and recycled plastic.
- Works with PE & PP.
- No change to the manufacturing process.
- Product does not lose any of its original properties during its useful life.
- Our customers receive full support from Symphony's Technical and Marketing teams.

# Helping to protect the environment from persistent plastic litter.

**Disclaimer:** The information provided is general information. For specific applications, please consult our Technical Department. The buyer is responsible for advertising and labeling of products made with d<sub>2</sub>w, and for compliance with all applicable laws and codes of practice in the place where such products are to be supplied, advertised, or used.

## d<sub>2</sub>w is tested to work in terrestrial and marine environments.













@ Symphony Environmental

