



by





The benefits of Plastic Packaging

- Lightweight
- Flexible
- Strong/Durable
- Heat sealable
- Impervious to moisture
- Printable
- Recyclable
- Reusable
- By-product of oil refining

but...





400 years

***FACT**

PLASTICS CAN TAKE
UP TO 400 YEARS TO
BREAK DOWN

TRUE


**Symphony
environmental**



The Plastic Disposal Issue

Current options on disposal of plastic waste:

- Traditional landfill
- Incineration
- Recycle
- Composting



● **ONLY IF IT CAN BE COLLECTED**





How does d₂w[®] eco-compatible plastic work?

- d₂w[®] is an additive technology that is added into the basic polymer resin during the manufacturing process
- Breaks molecular chain
- Plastic starts degrading at end of pre-determined useful life
- Process of oxidation – caused by light, heat and stress
- Bio-degradation completed by micro-organisms

Residues

- Water
- CO₂
- Biomass
- **NO “HEAVY METALS”**



Added Value Solution

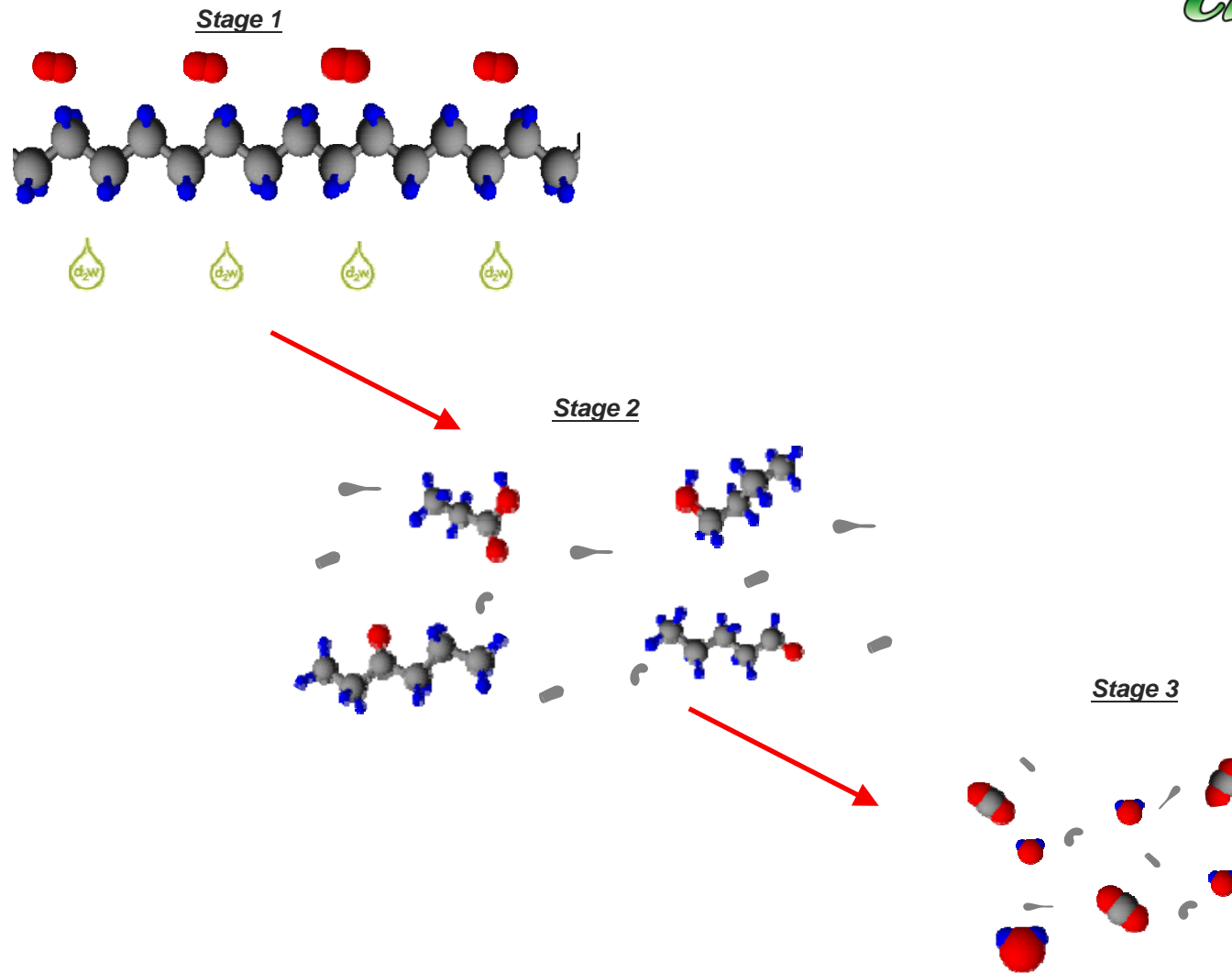
→ d_2w [®] *Eco-compatible Plastic Technology*

- Complete degradation 3 – 5 years after the end of the products' predetermined useful life span*
- If littered, degradation can take place within a few short months when exposed to hot climatic conditions

* Depends on product type and exposure conditions



The Process



- Carbon
- Hydrogen
- Oxygen
- ☉ Microorganism (*Stenotrophomonas sp.*, *Pseudomonas sp.*, *Rhodococcus sp.*, *Acinetobacter sp.* etc)

The degradation process



Continuing fragmentation

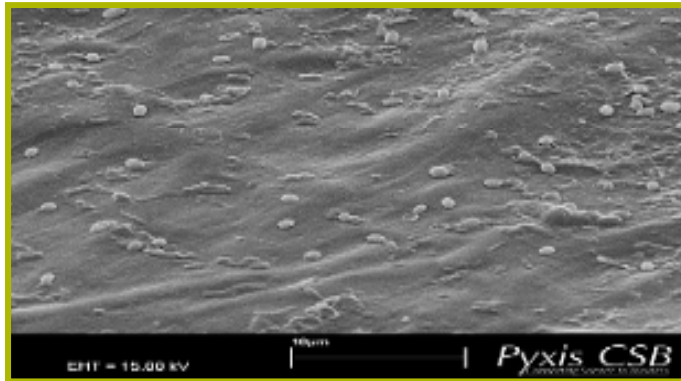


Embrittlement of plastic bag



How does it Work?

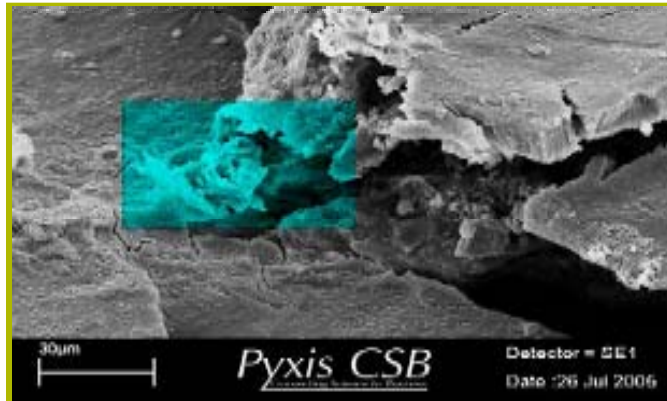
The process



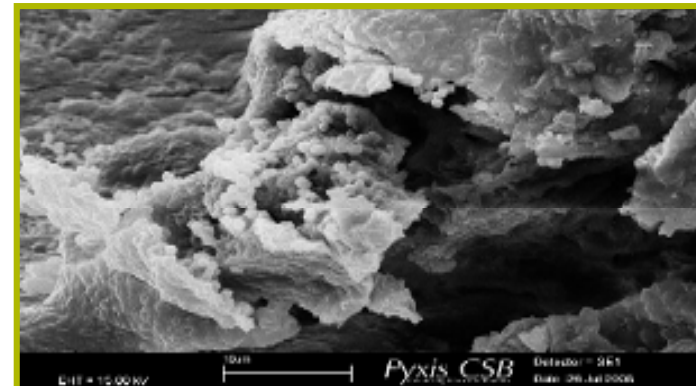
Un-oxidised film. Film intact and limited microbial activity on surface due to the surface being hydrophobic



Cracks and fissures on surface of oxidised, hydrophilic film



Furrows and ridges eroded into the surface of the film by microbial activity



Microbial colonisation on surface of oxidised, hydrophilic film



Oxo-biodegradable POO Bags™ available from

The POO Crew, LLC

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