Symphony environmental

Registered in England no. 3286343

Certification of d_2w® Additive

This is to certify the following verifications of the technical specification and performance of d_2w®:

d_2w® is an oxo-biodegradable additive that renders conventional polyolefin oxo-biodegradable

"*Oxo-Biodegradation*; is defined as "*Degradation identified as resulting from oxidative and cell-mediated phenomena, either simultaneously or successively." (s*ource:- "Terminology in the field of degradable and biodegradable Polymers and Plastics" CEN TC 249/ WG 9).

Polyolefin products made with d_2w® additive will decompose in the presence of oxygen, into CO_2, water, mineral salts and biomass

No harmful residues result from the total degradation of the additive. The Ecotoxicity section of EN 13432, and Tier 3 of ASTM 6954-04 require that no harmful residues occur – this has been verified for d_2w. Evidence; OWS Report MST-4/1-d2wb&d2wc.

Degradation has been proved in accordance with the requirements of ASTM 6954-04 Tier 1 by passing ASTM 5510 Degradation Standard. Evidence: RAPRA Report 46095.

The ability of d_2w® to comply with the biotic (Biodegradation) Tier 2 of ASTM 6954-04 has been demonstrated by the loss of molar mass achieved after degradation. Evidence: RAPRA Report 46303

The additive is safe for direct food contact according to the requirements of 2002/72/EC regulations for Direct Food Contact materials. Evidence:- RAPRA report 46137. It is however the responsibility of the manufacturers of products intended for food-contact to ensure that any other materials incorporated by them comply with this standard.

Polymer products made with d_2w® can comply with the EU Packaging Waste Directive 92/64/EC Essential Requirements Annex II.

All OWS and RAPRA reports can be accessed on Symphony's web site: www.degradable.net

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MICHAEL F. STEPHENS
Technical Director
1st January 2009

ISO 9001-2000 | Oxo-biodegradable Plastic Association | Market of London Stock Exchange | Society of Plastic Engineers | Green Apple Award | PLUS Market Group | Millennium Award