

STATEMENT

Aerobic biodegradation under controlled composting conditions of M-49

On January 28, 2011 a controlled composting biodegradation test was initiated on M-49 on behalf of Mazzucchelli 1849 S.p.A. (Italy). The test was executed according to the international standard ISO 14855 *Determination of the Ultimate Aerobic Biodegradability and Disintegration of Plastics under Controlled Composting Conditions* (2005). All criteria for a valid test were fulfilled. The report on this study, with code RA-DDOM-1b, was published on Jun-22-2011.

In the meantime the international test method ISO 14855 (2005) has been revised to ISO 14855-1 *Determination of the ultimate aerobic biodegradability of plastic materials under controlled composting conditions – Method by analysis of evolved carbon dioxide* (2012), but the test procedure for biodegradation has remained identical and the results are still in line with the biodegradation requirements of EN 13432 *Requirements for packaging recoverable through composting and biodegradation – Test scheme and evaluation criteria for the final acceptance of packaging* (2000) and ISO 17088 *Specifications for compostable plastics* (2012).

M-49 reached an absolute biodegradation of $101.8\% \pm 10.2\%$ (82.7% relative biodegradation compared to cellulose) after 115 days of testing and as such fulfills the 90% absolute biodegradation requirement within 180 days of testing as stipulated by EN 13432 (2000). In case the material does not contain organic constituents at levels between 1% to 10% also the biodegradation requirement of ISO 17088 (2012) is fulfilled. According to ISO 17088 (2012) these constituents shall be tested individually.

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