

COMPARATIVE STUDY OF POLYSTYRENE FOAM DEGRADATION IN THE OPEN-AIR AND ARTIFICIAL WEATHERING EXPOSURE

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Abstract

Polystyrene foam (PS foam) both without and with 1% Benzoyl peroxide coated were found to be exponentially degraded within 6 months under the open-air and artificial weathering exposure. The reaction mechanism of this foam was identified as chain scission. The peroxide was effectively used as photo accelerator. The experimental data and also the statistical hypothesis analysis using t-test with the 95% degree of confidence suggested that the data obtained from the open-air and the ones from artificial weathering exposure were analogous.