Review of the Applications of Biocomposites in the Automotive Industry

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The article provides an overview of biocomposite application in the automotives via a documentation of their history, chronology and progressive steps taken to break into the production lines of a number of key auto makers. It offers a detailed analysis of the key factors that have motivated the research and subsequent adoption of biocomposites; taking a peek at the advantages, disadvantages, and challenges experienced in the process. Auto makers and parts suppliers that have been a force behind this campaign, have also been accorded a fair share in the article. Future projection of role of these materials in the industry; with the ideas well dressed in form of bio concept cars caps up the paper. Automotive refers to; passenger cars, sport utility vehicles, vans, trucks, buses, and recreational vehicles. POLYM. COMPOS., 00:000–000, 2016.

tional fibers and to a bigger extent glass fibers, have been unrivalled as automotive composite reinforcements since their inception in the industry in 1953. General Motors set precedence using them in Chevrolet Corvette [4] where a total of 46 separate glass fiber-reinforced parts made in open molds by hand rolling polyester resins into glass fiber mats were supplied by Molded Fiber Glass Company of Ashtabula, Ohio. These were used in the assembly of a prototype car; after which, a batch of three hundred were made. The reason for this momentous switch from traditional steel and aluminum parts to glass composites was to attain an improved weight reduction, better mechanical properties, and processing efficiency. Ever since, glass fibers' positive attributes; great abundance, low cost, good mechanical properties, and reliable