



## 3M customers showcase microspheres in automotive parts

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CHICAGO (June 23, 8:56 p.m. ET) -- 3M is letting its customers do the talking at its NPE booth (W12103). The St. Paul, Minn.-based company has exhibited its glass microsphere products before, but this time it has given floor space to companies that are developing applications containing 3M glass "bubbles".

The idea, said Lou Lundberg, 3M market development manager, is to show the wide range of possibilities for the microspheres as a replacement for other fillers. The underlying theme of all the applications exhibited is the desire to reduce weight.

3M customer Noble Polymers of Grand Rapids, Mich., has developed a low density polyolefin resin formulation using 3M glass bubbles that can reduce the weight of polyolefin plastic parts by up to 20 percent.

Tim Patterson, business unit manager at the compounder, held up the seat of an office chair that Noble has used for demonstration purposes to show the formulation in action. The microsphere filled seat weighs 2.05 pounds, compared with the previous talc filled version that weighs 2.25 pounds.

He said another project involves a toolbox molded in high density PE, which has seen an 11 percent weight reduction through use of the microsphere filler.

Another customer on the 3M booth, Continental Structural Plastics of Troy, Mich., is dealing with much bigger parts. The company makes sheet molding compounds used in John Deere tractor covers, where use of the 3M microspheres has cut 5 pounds from the weight of a part that had previously weighed 27 pounds.

Michael Siwajek, manager of materials development at CSP, said nanoclays had also been tried out but the microspheres provide a superior surface. The company is now working with engineers at various automotive groups to develop a specification for Class A surface materials that contain the microspheres.

3M's Lou Lundberg indicated another automotive application on display — pillar trim moulded by Hanil E-Hwa, a Tier One supplier to Hyundai in South Korea. In this part, the glass microspheres are optimised with talc and glass fibre content to reduce weight by 10 percent.

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