

Nano-sized fillers have big impact on PVC pipe

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NanoMaterials Technology Pte Ltd., a Singapore-based supplier of nano-precipitated calcium carbonate (NPCC) fillers, claims a 2 to 4% loading of such materials yields a six-fold enhancement in impact strength of PVC pipe compared to a conventionally-filled pipe. "We see a change in [polymer] crystallinity around the filler, which enhances impact strength," says Jimmy Yun, managing director.

NPCC is 50% less expensive than chlorinated polyethylene (CPE) modifiers for PVC, and it aims to replace acrylic modifiers, as well. The firm has a 10,000-tonne/yr plant in Shanxi province, China, that produces 15- to 40-nm NPCC fillers. Two more such plants in China are due this year.