

- [54] **METHOD OF MOLDING USING A SOLID FLOWABLE POLYMER MEDIUM WITH METAL ADDITIVES**
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[57] **ABSTRACT**

A flowable particulate polymer-metal mixture that is thermally conductive and is particularly adapted for use as a pressurizing medium in a high pressure elevated temperature molding process. The material comprises a substantially uniform mixture of about 20% to about 90% solid flowable, particulate silicone rubber having a nominal flow rate of at least 0.6 gram/second through a 1.1 cm diameter pipe 7.6 cm long under applied pressure of 10.34 MPa at room temperature. The material also comprises about 10% to about 80% thermally conductive particulate metal that has a melting point less than the molding temperature and is substantially chemically compatible with said silicone rubber. The pressurizing medium is used to mold article precursors into articles by placing an article precursor within a pressure vessel and substantially filling the vessel with a pressurizing mixture. The mixture is exposed to a temperature equal to or greater than the metal melting point and is caused to produce a substantially uniform predetermined medium pressure on the surface of the article precursor to mold the article. The molten metal transfers heat to the article precursor yet since it is molten the polymer-metal mixture is flowable.

5 Claims, 1 Drawing Sheet

