

Title (en)

LOW-DENSITY INJECTION-MOLDED BODY COMPONENTS

Title (de)

SPRITZGEGOSSENE KAROSSERIEBAUTEILE MIT GERINGER DICHTE

Title (fr)

ELEMENTS DE CARROSSERIE DE FAIBLE DENSITE MOULES PAR INJECTION

Publication

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Application

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- US 18463900 P 20000224
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Abstract (en)

[origin: WO0162486A1] The present invention provides a co-injection molded, multiphase vehicle component having a microsphere enhanced region, as well as a method for constructing such a vehicle component. The vehicle component has an outer portion or phase that is formed by first injecting a preselected quantity of a desired thermoplastic material into a preselected mold (402) in a manner to achieve a first layer of the thermoplastic material in a cavity of the mold. Then, a microsphere enhanced inner portion or phase is formed by injection of a microsphere enhanced core material (404) to fill a remaining portion of the cavity. The resulting vehicle component typically has a lower density, and thus a lower weight, is generally less costly, and maintains the desired strength by selection of suitable microspheres, typically substantially hollow, and a suitable proportion of microspheres per unit volume of core material.

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Citation (search report)

- [Y] US 3873656 A 19750325 - GARNER PAUL JOHNSON
- [Y] GB 2087299 A 19820526 - CIGALA & BERTINETTI IND
- [Y] WO 9601732 A1 19960125 - D & S PLASTICS INT [US]
- [Y] US 5800912 A 19980901 - OGISO KOICHI [JP], et al
- [X] FILLMANN, W.: "Die wirtschaftliche Herstellung von Produkten nach dem Mehrkomponenten-Spritzgiessverfahren beim Einsatz von Regranulat, Kunststoffabfällen und gefüllten Kunststoffen", PLASTERVARBEITER, vol. 29, no. 2, 1978, pages 66 - 71, XP009007202
- [Y] PRITCHARD, G.: "Plastics Additives - An A-Z reference", 1998, CHAPMAN & HALL, LONDON, ISBN: 041272720, XP002233970
- [Y] PATENT ABSTRACTS OF JAPAN vol. 005, no. 119 (M - 081) 31 July 1981 (1981-07-31)
- See references of WO 0162486A1

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