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**(54) Title (EN):** EXPANDED POLYSTYRENE BEAD HAVING FUNCTIONAL SKIN LAYER, MANUFACTURING PROCESS THEREOF, AND FUNCTIONAL EPS PRODUCT AND MANUFACTURING PROCESS THEREOF USING THE SAME

**(54) Title (FR):** PERLE DE POLYSTYRENE EXPANSE A PEAU FONCTIONNELLE, PROCEDE DE FABRICATION CORRESPONDANT, ET PRODUIT EN POLYSTYRENE EXPANSE FONCTIONNEL AINSI QUE PROCEDE DE FABRICATION CORRESPONDANT

**(57) Abstract:**

**(EN):** Disclosed herein are expanded polystyrene particles having a polyvinyl acetate resin-based functional skin layer formed on the surface of expanded polystyrene particles. Further disclosed are a process for producing the expanded polystyrene particles and the use of the expanded polystyrene particles. According to the expanded polystyrene particles of the present invention, inherent properties of the expanded polystyrene, e.g., light weight, thermal insulation properties, shape stability, buffering properties and sound absorption, are ensured, and superior low-temperature bonding properties, air-tightness, waterproofness and durability are provided by the vinyl acetate based polymer constituting the skin layer. Optionally, various functional additives, including flame retardants, water repellents, antibacterial agents, colorants, flavoring agents, etc., can be added to the polyvinyl acetate resin to impart a variety of functions to the expanded polystyrene particles in a simple manner.

**(FR):** L'invention concerne des particules de polystyrène expansé à peau fonctionnelle à base de résine d'acétate de polyvinyle établie sur la surface des particules, ainsi qu'un procédé de fabrication correspondant, et l'utilisation des particules. Ces particules ont des propriétés inhérentes au polystyrène expansé, à savoir légèreté, isolation thermique, stabilité de forme, fonction de tampon et absorption phonique. De plus, le polymère à base d'acétate de vinyle constituant la peau améliore d'autres propriétés : liaison à basse température, imperméabilité à l'air, étanchéité et durabilité. Eventuellement, divers additifs fonctionnels, y compris des agents ignifuges, hydrophobes, antibactériens, colorants, aromatisants, etc., peuvent être ajoutés à la résine susmentionnée, ce qui confère diverses fonctions aux particules, dans des conditions simples.

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