ABSTRACT

GEL COMPRISING A PHASE-CHANGE MATERIAL, METHOD OF PREPARING THE GEL, THERMAL EXCHANGE IMPLEMENT COMPRISING THE GEL

Gel including a phase-change material and a gelling agent. In one embodiment, the phase-change material may be n-tetradecane and/or n-hexadecane. The gelling agent, which may constitute up to about 10%, by weight, of the gel, may be a high molecular weight styrene-ethylene-butylene-styrene (SEBS) triblock copolymer with a styrene:rubber ratio of about 30:70 to 33 :67 % by weight. To form the gel, the phase-change material and the gelling agent may be mixed at a temperature at which the phase-change material is in a liquid state and which is below the flash point of the phase-change material and at which the mixture is not a viscoelastic liquid, whereby a non-homogeneous mixture is produced. The non- homogeneous mixture may then be heated to a temperature that is below the flash point of the phase-change material and at which a viscoelastic liquid is formed. The viscoelastic liquid may then be cooled to room temperature.

FIG. 1