CLAIMS

1. A core material for a vacuum insulation panel, comprising:

an intermediate layer comprising a polyester fiber or a polypropylene (PP) fiber; and

an outer layer stacked on the intermediate layer;

wherein the outer layer comprises at least one of the thermoplastic fiber selected from an ethylene-propylene side by side (ES) fiber, a polypropylene (PP) fiber, a low-melting polyethylene terephthalate (LMPET) fiber, or a composite fiber thereof,

wherein the outer layer is formed by thermal bonding and does not form entanglement with the intermediate layer by needle punching,

wherein the outer layer is a flattened sheet-shaped support layer supporting the intermediate layer.

2. The core material according to claim 1, wherein the polyester fiber is a polyethylene terephthalate (PET) fiber, and the thermoplastic fiber is an ethylene-propylene side by side (ES) fiber.

3. The core material according to claim 1, wherein the ethylene-propylene side by side (ES) fiber in the outer layer is comprised in an amount of 15 to 25% by weight based on the weight of the core material.

4. The core material according to claim 1, wherein a plurality of the outer layer and the intermediate layer is comprised, wherein the outer layer and the intermediate layer are alternately stacked.

5. The core material according to claim 1, wherein the intermediate layer contains 100% by weight of polypropylene (PP) fibers.

6. The core material according to claim 5, wherein a plurality of the intermediate layers is stacked, and the outer layers are stacked on the uppermost and lowermost end of the intermediate layer.

7. The core material according to claim 1 having a thickness of about 3 to about 7 mm after vacuum.

8. A vacuum insulation panel comprising the core material according to claim 1.

9. The vacuum insulation panel according to claim 8, further comprising an envelope for vacuum-packing the core material.

10. The vacuum insulation panel according to claim 9, further comprising a getter for adsorbing and removing moisture or gas.

11. The vacuum insulation panel according to claim 8, wherein the initial thermal conductivity is about 18 mW/mK or less.

12. An insulated container comprising the vacuum insulation panel according to claim 8.

13. A method for manufacturing the core material for a vacuum insulation panel of claim 1, comprising:

carding polyester fibers or polypropylene (PP) fibers;

carding a thermoplastic fiber capable of thermal bonding;

stacking and arranging the carded fibers so that the polyester fibers or the polypropylene (PP) fibers are positioned in an intermediate layer and the thermoplastic fibers are positioned in an outer layer when stacked; and

forming the core material by web forming and layer bonding the fibers stacked and arranged through thermal bonding,

wherein the thermoplastic fiber is at least one selected from an ethylene-propylene side by side (ES) fiber, a polypropylene (PP) fiber, a low-melting polyethylene terephthalate (LMPET) fiber, or a composite fiber thereof; and

wherein the method does not include an additional needle punching process for bonding the outer layer and the intermediate layer.

14. A method for manufacturing the core material for a vacuum insulation panel according to claim 1, comprising:

forming an intermediate layer comprising polyester fibers or polypropylene (PP) fibers by needle punching;

forming an outer layer comprising thermoplastic fibers by spun bonding or thermal bonding; and

stacking the outer layer and the intermediate layer.