CLAIMS

~~1. A fiber aggregate for sound insulation, wherein~~

~~the fiber aggregate for sound insulation satisfies formulae (i) and (ii) below where the fiber aggregate for sound insulation has an average fiber diameter of Da and a bulk density of ρa.~~

~~(i) $450\ nm \leq Da \leq 8500\ nm$~~

~~(ii) $0.09\ g/cm^3 \leq \rho a \leq 0.33 g/cm^3$~~

~~2. The fiber aggregate for sound insulation according to Claim 1, wherein the fiber aggregate for sound insulation further satisfies a formula (i') below.~~

~~(i') $450\ nm \leq Da \leq 1650\ nm$~~

~~3. The fiber aggregate for sound insulation according to Claim 1, wherein the fiber aggregate for sound insulation further satisfies a formula (ii') below.~~

~~(ii') $0.09\ g/cm^3 \leq \rho a \leq 0.22\ g/cm^3$~~

~~4. The fiber aggregate for sound insulation according to Claim 1, wherein the fiber aggregate for sound insulation further satisfies formulae (i'') and (ii'') below.~~

~~(i'') $1350\ nm \leq Da \leq 1650\ nm$~~

~~(ii'') $0.18\ g/cm^3 \leq \rho a \leq 0.22\ g/cm^3$~~

~~5~~1. A sound absorbing and insulating material comprising: a first fiber aggregate layer; and a second fiber aggregate layer superimposed on the first fiber aggregate layer, wherein

the first fiber aggregate layer is composed of the fiber aggregate for sound insulation ~~according to any one of Claims 1 through 4~~,

the fiber aggregate for sound insulation satisfies formulae (i') and (ii) below where the fiber

aggregate for sound insulation has an average fiber diameter of Da and a bulk density of ρa,

the second fiber aggregate layer is composed of a fiber aggregate satisfying formulae (iii) and (iv) below where the fiber aggregate has an average fiber diameter of the second fiber aggregate of Db and a bulk density of the second fiber aggregate of ρb.

(i') 450 nm ≤ Da ≤ 1650 nm

(ii) 0.09 g/cm^3 ≤ ρa≤ 0.33g/cm^3

(iii) 4000 nm ≤ Db ≤ 8500 nm

(iv) 0.04 g/cm^3 ≤ ρb ≤ 0.06 g/cm^3.

2. The sound absorbing and insulating material according to Claim 1, wherein the fiber aggregate for sound insulation further satisfies a formula (ii') below,

(ii') 0.09 g/cm^3 ≤ ρa ≤ 0.22 g/cm^3.

3. The sound absorbing and insulating material according to Claim 1, wherein the fiber aggregate for sound insulation further satisfies formulae (i'') and (ii'') below,

(i'') 1350 nm ≤ Da ≤ 1650 nm

(ii'') 0.18 g/cm^3 ≤ ρa ≤ 0.22 g/cm^3.

~~6~~4. The sound absorbing and insulating material according to any one of Claims ~~5~~1 to 3, wherein the sound absorbing and insulating material further satisfies a formula (v) below where the first fiber aggregate layer has a thickness of ta and the second fiber aggregate layer has a thickness of tb~~.~~

(v) ta < tb.

~~7~~5. The sound absorbing and insulating material according to Claim ~~5~~4, wherein the sound absorbing and insulating material further satisfies a formula (vi) below~~.~~

(vi) ta/tb ≤ ~~1/2~~½.

~~8~~6. The sound absorbing and insulating material according to any one of Claims ~~5~~ 1 ~~through 7~~to

5, wherein the first fiber aggregate layer and the second fiber aggregate layer are composed of an identical material.

~~9~~7. A sound absorbing and insulating material for a vehicle used for a vehicle, the material comprising the sound absorbing and insulating material according to any one of Claims ~~5 through 7~~1 to 6, wherein

the first fiber aggregate layer is arranged on an outdoor side of the vehicle and the second fiber aggregate layer is arranged on an indoor side of the vehicle.