CLAIMS

1. A heat-insulating and sound-absorbing material comprised of an agglomerate of inorganic fibers,

wherein the agglomerate has a density of 10 to 20 kg/m^3, and the inorganic fibers of the agglomerate have a length-weighted average fiber diameter of 2.0 to 8.7 μm, and

wherein the agglomerate contains: 20 to 66% of inorganic fibers having a length-weighted average fiber diameter of less than 4.0 μm; and 13 to 58% of inorganic fibers having a length-weighted average fiber diameter of 7.0 μm or more, wherein a sum of respective percents of the inorganic fibers having a length-weighted average fiber diameter of less than 4.0 μm, inorganic fibers having a length-weighted average fiber diameter of 4.0 μm to less than 7.0 μm, and the inorganic fibers having a length-weighted average fiber diameter of 7.0 μm or more is 100%,

wherein the inorganic fibers are glass wool.

2. The heat-insulating and sound-absorbing material as recited in claim 1, wherein the agglomerate comprises a first layer and a second layer which are laminated together and is formed in a plate-like shape, wherein inorganic fibers of the first layer have a length-weighted average fiber diameter greater than that of inorganic fibers of the second layer by 0.1 to 3.0 μm.

3. The heat-insulating and sound-absorbing material as recited in claim 1, wherein the agglomerate comprises a first layer, a second layer and a third layer which are laminated together in this order and is formed in a plate-like shape, wherein inorganic fibers of the first layer and the third layer have a length-weighted average fiber diameter greater than that of inorganic fibers of the second layer by 0.1 to 3.0 μm.

4. The heat-insulating and sound-absorbing material as recited in any one of claims 1 to 3, wherein the agglomerate comprises a plurality of layers which are laminated together and is formed in a plate-like shape, wherein inorganic fibers of an outermost one of the

plurality of layers have a length-weighted average fiber diameter of 4.3 to 7.0 μm.

5. The heat-insulating and sound-absorbing material as recited in any one of claims 1 to 4, wherein the inorganic fibers of the agglomerate have a length-weighted average fiber diameter of 3.8 to 5.3 μm.

6. The heat-insulating and sound-absorbing material as recited in any one of claims 1 to 5, wherein the agglomerate contains the inorganic fibers having a length-weighted average fiber diameter of 7.0 μm or more, in an amount of 13 to 33%.

7. The heat-insulating and sound-absorbing material as recited in any one of claims 1 to 6, wherein the agglomerate contains the inorganic fibers having a length-weighted average fiber diameter of less than 4.0 μm, in an amount of 41 to 66%.

8. The heat-insulating and sound-absorbing material as recited in any one of claims 1 to 7, wherein the agglomerate contains a binder for agglomerating the inorganic fibers, in an amount of 1.0 to 8.5% by weight, with respect to an overall weight of the agglomerate, the binder having a binder strength of 3.6 to 6.1 N/mm^2.

9. The heat-insulating and sound-absorbing material as recited in claim 8, wherein the binder includes a thermo-setting resin curable by a reaction selected from the group consisting of amidation reaction, imidization reaction, esterification reaction and transesterification reaction.

10. A partition wall comprising a hollow wall portion, and the heat-insulating and sound-absorbing material as recited in any one of claims 1 to 9, installed in the hollow wall portion.

11. The partition wall as recited in claim 10, which comprises:

a wall base comprising

a lower runner disposed on a floor structure,

an upper runner fixed to an upper story structure, and

studs built up vertically between the lower runner and the upper runner, by a single-runner and staggered-stud construction method, a single-runner and common-stud construction method, a single-runner and common-stud construction method using a staggered backing pad arrangement, a single-runner and staggered-stud construction method using a staggered backing pad arrangement, or a double-runner and parallel-stud construction method; and

surface members installed on each of transversely opposite sides of the wall base to extend from the floor structure to the upper story structure.

12. The partition wall as recited in claim 11, wherein the surface member is comprised of a board of a noncombustible material or quasi-noncombustible material, or of a laminate comprising the board.

13. The partition wall as recited in claim 11 or 12, wherein the surface member is comprised of a gypsum or fiber-reinforced gypsum board, or of a laminate comprising the gypsum or fiber-reinforced gypsum board.

14. The partition wall as recited in claim 12 or 13, wherein the surface member has a thickness of 20 mm or more.