Claims

1. A ballistic layer for a ballistic multilayer arrangement ~~(1)~~, wherein ~~characterised in that~~ ~~it is~~ the ballistic layer is formed by an absorption layer ~~(2, 2a, 2b)~~ that entirely or largely comprises expanded glass ~~(21).~~ present in the form of sintered expanded glass granulated held in dense packing of fill by means of a matrix that encloses the expanded-glass granulate.

~~2. The ballistic layer according to claim 1, characterised in that the expanded glass (21) is present in the form of sintered expanded-glass granulate (22).~~

~~3. The ballistic layer according to claim 1, characterised in that the expanded glass (21) is present in the form of expanded-glass granulate (22) held in a dense packing or fill by means of a matrix (24) that encloses the expanded-glass granulate.~~

~~4~~2. The ballistic layer according to ~~any one of~~ claim~~s~~ 1 ~~to 3~~, ~~characterised in that~~ wherein the expanded-glass granulate ~~(22)~~ comprises a granulate size of 0.01 mm to 5 mm.

~~5~~3. The ballistic layer according to ~~any one of~~ claim~~s~~ 1 ~~to 4~~, ~~characterised in that~~

wherein the expanded glass ~~(21)~~ or expanded-glass granulate ~~(22)~~ predominantly comprises SiO_2.

~~6~~4. The ballistic layer according to ~~any one of~~ claim~~s~~ 1 ~~to 5~~,
~~characterised in that~~
wherein as further ingredients the expanded glass ~~(21)~~ or expanded-glass granulate ~~(22)~~ comprises Na_2O and CaO.

~~7~~5. The ballistic layer according to ~~any one of~~ claim~~s~~ 1 ~~to 6~~,
~~characterised in that~~
wherein as further ingredients the expanded glass ~~(21)~~ or expanded-glass granulate ~~(22)~~ comprises a small amount, in each case below 10 percent weight by weight, of Al_2O_3 and/or MgO and/or K_2O.

~~8~~6. The ballistic layer according to ~~any one of~~ claim~~s 3~~ 5 ~~to 7~~,
~~characterised in that~~
wherein the matrix ~~(24)~~ comprises a synthetic material or a synthetic resin or a mixture of synthetic material/synthetic resin, which mixture is, in particular, impact-resistant.

~~9~~7. The ballistic layer according to claim ~~8~~6,
~~characterised in that~~
wherein the synthetic material mixture comprises polyurethane and/or polyethylene and/or epoxy resin and/or silicon and/or an impact-proof synthetic material and/or an impact-resistant synthetic material.

~~10~~8. A ballistic multilayer arrangement ~~(1)~~ with an impact side (A) and a back side (B) and a ballistic layer ~~(2)~~ according to ~~any one of~~ claim~~s~~ 1 ~~to 9~~,
~~characterised in that~~
wherein at least one of the layers is formed by a multilayer fibre layer ~~(4, 41, 42, 43)~~ comprising layers of aramid fibres or comparable fibres, wherein said multilayer fibre layer ~~(4, 41, 42, 43)~~ is, in particular, designed in the form of a woven material or a multilayer woven material.

~~11~~9. The ballistic multilayer arrangement according to claim ~~10~~8,
~~characterised in that~~
wherein at least one of the layers is formed by a plate ~~(5)~~ comprising fine stone or natural stone or ceramic or a ceramic mix, in particular comprising a composite-structure material.

~~12~~10. The ballistic multilayer arrangement according to ~~one of~~ claim~~s~~ 8~~10 or 11~~,
~~characterised in that~~
wherein at least one layer is a spall layer ~~(6)~~ comprising spalls ~~(61)~~ of ceramic or ceramic metal or fine stone or natural stone, which spalls ~~(61)~~ are bound in a matrix ~~(62)~~.

~~13~~11. The ballistic multilayer arrangement according to ~~any one of~~ claim~~s~~ 8~~10 to 12~~,
~~characterised in that~~
wherein at least one layer is formed by a metal plate ~~(7, 71, 72)~~.

~~14~~12. The ballistic multilayer arrangement according to ~~any one of~~ claim~~s~~ ~~8~~10 ~~to 13~~, ~~characterised in that~~ wherein at least one layer is formed by a highly tenacious synthetic layer.

~~15~~13. The ballistic multilayer arrangement according to claim ~~14~~12, ~~characterised in that~~ wherein the highly tenacious synthetic layer forms the matrix ~~(24)~~ of the absorption layer ~~(2)~~.

~~16~~14. The ballistic multilayer arrangement according to ~~any one of~~ claim~~s~~ ~~8~~10 ~~to 15~~, ~~characterised in that~~ wherein said arrangement is surrounded by a synthetic cover layer ~~(8)~~ or a fibre-reinforced synthetic braiding layer at least on one of the impact side (A) and the back side (B).

~~17~~15. The ballistic multilayer arrangement according to ~~any one of~~ claim~~s~~ ~~8~~10 ~~to 16~~, ~~characterised in that~~ wherein in the layer sequence the absorption layer ~~(2)~~ is followed at least on one of its sides by a fibre layer ~~(4)~~.

~~18~~16. The ballistic multilayer arrangement according to ~~any one of~~ claim~~s~~ ~~8~~10 ~~to 17~~, ~~characterised in that~~

wherein the arrangement is designed so as to be flexible as a mat or a blanket.

~~19~~17. The ballistic multilayer arrangement according to ~~any one of~~ claim~~s~~ 8~~10 to 18~~, ~~characterised in that~~
wherein the arrangement is designed as a rigid plate.

~~20~~18. The ballistic multilayer arrangement according to ~~any one of~~ claim~~s~~ 8~~10 to 17 or 19~~, ~~characterised in that~~
wherein at least one fine stone layer, natural stone layer or ceramic layer, a fibre layer and a metal layer are provided.

~~21~~19. The ballistic multilayer arrangement according to ~~any one of the preceding~~ claim~~s~~ 8~~10 to 19 or 19 to 20~~, ~~characterised in that~~
wherein the layer sequence is selected as follows:
[[-]] an enveloping layer,
[[-]] a ceramic layer, in particular followed by a metal layer,
[[-]] a fibre layer and an absorption layer sequence,
[[-]] a metal layer.