Claims

1. A process for batchwise or continuous production of a single-layer or multilayer lignocellulose material, comprising the process steps of (Ia) producing a mixture M1 and (Ib) optionally one or more mixture(s) M2, (II) scattering mixture M1 and any mixture(s) M2 to give a mat, (III) optionally precompacting the scattered mat and (IV) hot pressing, wherein mixture M1 comprises lignocellulose particles (LCP-1) and additionally a) 0.005% to 0.5% by weight of organic carboxylic acid, carboxylic anhydride, carbonyl chloride or mixtures thereof (component A) b) 0.05% to 3% by weight of organic isocyanates having at least two isocyanate groups (component B) and c) 5% to 15% by weight of binder selected from the group of the amino resins (component C) d) 0% to 2% by weight of hardener (component D) and e) 0% to 5% by weight of additive (component E), and mixture(s) M2 comprise(s) lignocellulose particles (LCP-2) and additionally f) 0% to 0.3% by weight of organic carboxylic acid, carboxylic anhydride, carbonyl chloride or mixtures thereof (component F), g) 1% to 30% by weight of binder selected from the group consisting of amino resin, phenolic resin, protein-based binder and other polymer-based binders, and mixtures thereof (component G-1) and 0% to 3% by weight of organic isocyanate having at least two isocyanate groups (component G-2), h) 0% to 2% by weight of hardener (component H) and i) 0% to 5% by weight of additives (component I), with the proviso that the following conditions are fulfilled: a.sub.min<a <a.sub.max and a.sub.min=[(-T/6000)+(65/6000)] and a .sub.max=[(-T/2000)+(75/2000)] where T is the temperature of mixture M1 in .degree. C. after process step (Ia) and is between 10 and 65.degree. C., and a is the amount of acid equivalents in component A) in relation to the mass of component C) in mol/100 g.

2. The process for batchwise or continuous production of single-layer or multilayer lignocellulose materials according to claim 1, wherein, in process step (Ia), component A) or the mixture of component A) and component B) or the mixture of component A), component B) and component E) and component C) or a mixture of component C) with one or more components selected from the group of components B), D) and E) are applied to the lignocellulose particles (LCP-1) (1) separately from one another or (2) as a mixture within 0.1 to 3600 seconds after production of the mixture.

3. The process for batchwise or continuous production of single-layer or multilayer lignocellulose materials according to claim 1, wherein some or all of component A) is mixed with component B) or a portion of component B) before it is contacted with the lignocellulose particles (LCP-1).

4. The process for batchwise or continuous production of single-layer or multilayer lignocellulose materials according to claim 1, wherein all of component A) is mixed with component B) or a portion of component B) before it is contacted with the lignocellulose particles (LCP-1).

5. The process for batchwise or continuous production of single-layer or multilayer

lignocellulose materials according to claim 1, wherein a portion or the entire amount, of component A) is mixed with component B) or a portion of component B) and with component E) or a portion of component E) to give a mixture ABE) before it is contacted with component LCP-1).

6. The process for batchwise or continuous production of single-layer or multilayer lignocellulose materials according to claim 1, wherein component C) which has optionally been mixed in a separate step with one or more components selected from the groups of components B), D) and E), and component A) or the mixture of component A) with component B) or the mixture of component A) with component B) and component E) are added to the lignocellulose particles LCP-1) or to the mixture of lignocellulose particles LCP-1) with one or more components selected from the groups of components B), D) and E) separately from one another or as a mixture within 0.1 to 3600 seconds.

7. The process for batchwise or continuous production of single-layer or multilayer lignocellulose materials according to claim 1, wherein an initial charge of component LCP-1) is mixed with component C) and component D), together or in any sequence, followed by addition of component E) and then of components A) and B), together or in any sequence, or of components A) and B), together or in any sequence, and then of component E).

8. The process for batchwise or continuous production of single-layer or multilayer lignocellulose materials according to claim 1, wherein an initial charge of component LCP-1) is mixed with component A) and component B), together or in any sequence, followed by addition of component E) and then of components C) and D), together or in any sequence, or of components C) and D), together or in any sequence, and then of component E).

9. The process for batchwise or continuous production of single-layer or multilayer lignocellulose materials according to claim 1, wherein an initial charge of component LCP-1) is mixed with component E), followed by addition of component C) and component D), together or in any sequence, then of components A) and B), together or in any sequence, or of components A) and B), together or in any sequence, and then of component C) and component D), together or in any sequence.

10. The process for batchwise or continuous production of single-layer or multilayer lignocellulose materials according to claim 1, wherein an initial charge of component LCP-1) is mixed with component E), followed by addition of a mixture of components A), B), C) and D).

11. The process for batchwise or continuous production of single-layer or multilayer lignocellulose materials according to claim 1, wherein an initial charge of component LCP-1) is mixed with a mixture of components A), B), C) and D), followed by addition of component E).

12. The process for batchwise or continuous production of single-layer or multilayer lignocellulose materials according to claim 1, wherein an initial charge of component LCP-1) is

mixed with a portion of component E), followed by addition of a mixture of a further portion of component E) and components A), B), C) and D).

13. The process for batchwise or continuous production of single-layer or multilayer lignocellulose materials according to claim 1, wherein an initial charge of component LCP-1) is mixed with a mixture of a portion of component E) and components A), B), C) and D), followed by addition of a further portion of component E).

14. The process for batchwise or continuous production of single-layer or multilayer lignocellulose materials according to claim 1, wherein carboxylic anhydrides are used as component A).

15. The process for batchwise or continuous production of single-layer or multilayer lignocellulose materials according to claim 1, wherein C.sub.4 to C.sub.8 carboxylic anhydrides are used as component F).

16. The process for batchwise or continuous production of single-layer or multilayer lignocellulose materials according to claim 1, wherein a portion or the entire amount, of component A) is mixed with component B) or a portion of component B) and with component E) or a portion of component E) to give a mixture ABE) before it is contacted with component LCP-1).

17. The process for batchwise or continuous production of single-layer or multilayer lignocellulose materials according to claim 16, wherein mixture ABE) comprises 50% to 99% by weight of component A) and 1% to 50% by weight of component B), and 0% to 49% by weight of component E).

18. The process for batchwise or continuous production of single-layer or multilayer lignocellulose materials according to claim 1, wherein the mixture of component A) and component B) is used in the form of an essentially anhydrous mixture.

19. The process for batchwise or continuous production of single-layer or multilayer lignocellulose materials according to claim 1, wherein wood shavings are used as component LCP-1).

20. A particleboard, fiberboard, or oriented strand board comprising a single-layer or multilayer lignocellulose material obtained by the process according to claim 1.