

## Method for producing lignocellulose materials

## Abstract

- 5 The present invention relates to a novel and improved, batchwise or continuous, preferably continuous, process for producing single-layer or multilayer lignocellulose materials, comprising the process steps of
- (Ia) producing a mixture M1 and
- 10 (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,
- 15 in that mixture M1 comprises the lignocellulose particles (component 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
- 20 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) the lignocellulose particles (component LCP-2) and additionally
- 25 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 or mixtures thereof (component G-1) and 0% to 3% by weight of organic isocyanate having at least two isocyanate groups (component G-2),
- 5 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:

10  $a_{\min} < a < a_{\max}$

and

$a_{\min} = [(-1/6000 \cdot T) + (65/6000)]$ , preferably  $a_{\min} = [(-1/4500 \cdot T) + (65/4500)]$ , more preferably

15  $a_{\min} = [(-1/3500 \cdot T) + (65/3500)]$

and

$a_{\max} = [(-1/2000 \cdot T) + (75/2000)]$ , preferably  $a_{\max} = [(-1/2500 \cdot T) + (75/2500)]$ , more preferably

20  $a_{\max} = [(-1/3000 \cdot T) + (75/3000)]$ ,

where

T is the temperature of mixture M1 in °C after process step (Ia) and is between 10 and 65°C, preferably 12 and 62°C, more preferably 15 to 60°C, and

- 25 a is the amount of acid equivalents in component A) in relation to the mass of component C) in mol/100 g.