KUALITAS PAPAN PARTIKEL KAYU KARET (Hevea brasiliensis Muell. Arg) DAN BAMBU TALI (Gigantochloa apus Kurz) DENGAN PEREKAT LIKUIDA KAYU (Quality of Particle Board of Rubber Wood (Hevea brasiliensis Muell.Arg) and Tali Bamboo (Gigantochloa apus Kurz) with Wood LiquidsAdhesive)

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ABSTRACT

As an effort to utilize rubber wood waste and the abundant resource of tali bamboo a study of producing particle board using a mix of the two materials was conducted. In addition, in order to find an alternative to synthetic adhesive, natural adhesive of wood liquid was used. This research was conducted in a 3 x 3 factorial analisys in acomplete randomized block design with two replicates. The factors studied were the type of particles (rubber, bamboo rope and mixtures with a ratio of 50: 50 by oven dry weight) and levels of adhesive (10%, 15% and 20%. Results show that wood liquids adhesive is characterised with pH < 1, viscosity 2,03 poise, solid content 91%, gelatin time (90) 9 min 48 sec, spesific gravity 1,153 and having black colour. The characteristics do not fulfil requirement of SNI 06-0121-1987 for phenol adhesive. The producced particle board has a density of 0,83 g/cm , moisture content 6,9%, thickness swelling 19%, water adsorbtion 28%, MOE 10540 kgf/cm , MOR 258 kgf/cm , and Internal Bond (IB) 2,2 kgf/cm . The characteristics also do not fulfill the requirement ofSNI 03-2105-1996for medium density particleboard. Further research is still needed to meet the SNI requirements.

Keyword : Adhesive, wood liquids, quality, particle board wood liquids adhesive

ABSTRAK

Pemakaian perekat alami likuida kayu ( ) dengan campuran kayu karet dan bambu tali dimaksudkan sebagai upaya pemanfaatan limbah kayu karet dan bambu tali, di samping sebagai substitusi perekat sintetis. Dalam penelitian ini digunakan analisis faktorial 3 x 3 dalam rancangan acak lengkap dengan dua kali ulangan. Faktor-faktor yang diteliti adalah jenis partikel (karet, bambu tali dan campurannya dengan perbandingan 50 : 50 berdasarkan berat kering tanur) dan kadar perekat (10%, 15% dan 20%). Hasil penelitian menunjukan bahwa perekat likuida kayu memiliki ciri-ciri sebagai berikut: pH kurang dari 1, viskositas sebesar 2,03 poise, kadar padat perekat 91%, waktu gelatinasi (90) 9 menit 48 detik, berat jenis 1,153 dan warna perekat hitam. Berdasarkan ciri tersebut, perekat likuida kayu belum memenuhi syarat SNI 06-0121-1987 untuk perekat phenol formaldehida. Papan partikel campuran kayu karet dan bambu tali memiliki kerapatan 0,83 g/cm , kadar air 6,9%, pengembangan tebal 19%, daya serap air

28%, MOE 10540 kgf/cm , MOR 258 kgf/cm , dan Internal Bond (IB) 2,2 kgf/cm . Berdasarkan ciri tersebut, papan partikel tersebut belum memenuhi syarat SNI 03-2105-1996 untuk papan partikel berkerapatan sedang (medium density particle board).

Kata kunci :Perekat, likuida kayu, kualitas, papan partikel