

ABSTRAK

Penelitian ini dilakukan untuk membuat *paving block* dengan memanfaatkan limbah plastik, pecahan keramik, pasir, dan oli sebagai bahan alternatif infrastruktur yang aman, kuat dan tahan lama. *Paving block* yang dihasilkan diuji kelayakannya berdasarkan nilai uji kuat tekan, nilai uji serap air, dan nilai uji TCLP. Terdapat 4 variasi komposisi dalam penelitian ini. Berdasarkan hasil penelitian, *paving block* memiliki nilai uji kuat tekan dan uji serap air yang telah memenuhi standar berdasarkan SNI 03-0691-1996, dengan nilai uji kuat tekan rata-rata tertinggi terdapat pada *paving block* variasi 4 sebesar 13,08 MPa dan rata-rata terendah terdapat pada variasi 1 sebesar 9,11 MPa. Nilai uji serap air rata-rata tertinggi terdapat pada *paving block* variasi 1 sebesar 1,86 % dan rata-rata terendah terdapat pada variasi 4 sebesar 1,25 %. Nilai uji TCLP parameter logam berat Cu rata-rata tertinggi pada variasi 3 sebesar 0,29 mg/L dan rata-rata terendah pada variasi 4 sebesar 0,00 mg/L. Parameter logam berat Pb rata-rata tertinggi pada variasi 1 sebesar 0,70 mg/L dan rata-rata terendah pada variasi 3 sebesar 0,20 mg/L. Parameter logam berat Zn rata-rata tertinggi pada variasi 2 dan 3 sebesar 0,08 mg/L dan rata-rata terendah pada variasi 1 sebesar 0,04 mg/L. Kadar logam berat pada Cu, Pb, dan Zn memiliki nilai uji dibawah baku mutu sesuai dengan PP 22 tahun 2021.

Kata Kunci: Kuat Tekan, Limbah B3, *Paving Block*, TCLP.

ABSTRACT

This research aims at making paving block by using plastic waste, ceramic waste, oil waste and sand as the safe alternative infrastructure, strong and durable which is seen by compressive strength test value, water absorption test value and TCLP test value. There are four composition varieties. According to the research result, paving block has compressive strength test value and water absorption which has fulfill the standard of SNI 03-0691-1996, with the highest average compressive strength test value found in the 4th variation paving block of 13.08 MPa and the lowest average found in the 1st variation of 9.11 MPa. The highest average water absorption test value is found in the 1st variation paving block of 1.86% and the lowest average is found in the 4th variation of 1.25%. The TCLP test value for the heavy metal Cu heavy metal parameter was the highest in the third variation of 0.29 mg/L and the lowest average in the fourth variation was 0.00 mg/L. The highest average heavy metal Pb parameter in the 1st variation was 0.70 mg/L and the lowest average in the 3rd variation was 0.20 mg/L. The highest average weight metal parameter Zn in the 2nd and 3rd variations was 0.08 mg/L and the lowest average in the 1st variation was 0.04 mg/L. Heavy metal levels in Cu, Pb, and Zn have test values below the quality standard according to PP 22 of 2021.

Key Words: *Compressive Strength, Hazardous Waste, Paving Block, TCLP,*