ABSTRAK

Paving block memiliki karakteristik seperti mortar, dimana pasir sebagai bahan pengisi (*filler*) dan semen sebagai bahan pengikat. Namun, proses produksi semen tidak ramah lingkungan dan menggunakan semen secara berlebihan akan meyebabkan bahan dasar pembuat semen itu berkurang serta menimbulkan polusi. Solusi yang diambil untuk mengurangi penggunaan semen yaitu menggunakan limbah plastik, *styrofoam*, oli, dan kaca sebagai bahan penyusun *paving block*. Disamping itu penggunaan *paving block* berbahan limbah dapat mengurangi dampak pencemaran lingkungan. Penelitian ini bertujuan untuk mengetahui kinerja *paving block* campuran limbah plastik, *styrofoam*, kaca, dan oli menurut SNI 03-0691-1996. Pengujian paving block menurut SNI 03-0691-1996 meliputi pengujian kuat tekan, ketahanan aus, dan penyerapan air. Benda uji sebanyak empat variasi dibuat berdasarkan persentase limbah penyusun paving block pada temperatur pencampuran 175 C dan 200 C. Hasil dari penelitian ini dapat disimpulkan bahwa tidak ada benda uji yang memenuhi kategori mutu paving block berdasarkan SNI 03-0691-1996 hal tersebut disebabkan oleh nilai kuat tekan tidak memenuhi nilai kuat tekan minimum walaupun nilai ketahanan aus dan penyerapan air sudah memenuhi ketentuan SNI 03-0691-1996. Proses pencampuran bahan limbah *paving block* pada temperatur 200°C lebih mudah dibandingkan dengan temperatur 175°C. Tingkat kemudahan pencampuran bahan limbah *paving block* paling dipengaruhi oleh persentase sebruk kaca. Semakin

tinggi serbuk kaca, maka semkin tinggi tinggi tingkat kesulitan pencampuran limbah *paving block*.

Kata kunci : Paving Block, Limbah, Kuat Tekan, Ketahanan Aus, Penyerapan Air, *Workability*.

ABSTRACT

Paving blocks have characteristics such as mortar, where sand as fillers and cement as a binding material. However, the cement production process is not environmentally friendly and using cement excessively will cause the basic material of the cement maker to be reduced and cause pollution. The solution taken to reduce the use of cement is to use plastic waste, styrofoam, oil, and glass as paving block building materials. In addition, the use of paving blocks made from waste can reduce the impact of environmental pollution. This study aims to find out the performance of paving blocks mixed with plastic waste, styrofoam, glass, and oil according to SNI 03-0691-1996. Paving block testing according to SNI 03-0691-1996 includes hard press testing, wear resistance, and water absorption. Four variations of the test were made based on the percentage of waste that makes paving blocks at mixing temperatures of 175 C and 200 C. The results of this study can be concluded that there are no test objects that meet the paving block quality category based on SNI 03-0691-1996 this is due to strong pressure values not meeting the minimum press strong value even though the value of wear resistance and water absorption has met the provisions of SNI 03-0691-1996. The process of mixing paving block waste materials at 200 °C is easier than the temperature of 175 ° C. The ease of mixing of paving block waste materials is most influenced by the percentage of a piece of glass. The higher the glass powder, the higher the difficulty level of mixing paving block waste.

Keywords: *Paving Block, Waste, Strong Press, Wear Resistance, Water Absorption, Workability*