**THE EFFECT OF VARIATION SILICA FUME AND WASTE GLASS AGGREGATE IN PERVIOUS CONCRETE**

**WITH *CURING***

Dea Pratiwi\*1, Sutanto Muliawan2

1 Student of Civil Engineering, Engineerig Faculty, Sriwijaya University

2 Lecturer of Civil Engineering, Engineerig Faculty, Sriwijaya University

\*Korespondensi Penulis: deapratiwi05@gmail.com

**Abstract**

Pervious concrete is a concrete containing little or no fine aggregate; it consists of coarse aggregate and cement paste. It seems pervious concrete would be a natural choice for use in structural applications in this age of ‘green building’. Because, this concrete can be traversed by water which can provide a water flow rate around 0,14-1,22 cm/second. It provides superior insulation values when used in park area, trotoar, and through the direct drainage of rainwater, it helps recharge groundwater in pavement applications. This research was conducted to know the compressive strength and permeability of concrete with the substitution of waste glass aggregate and silica fume with curing soaked water. Variations of silica fume used in this research are 10%, 15%, and 20% as substitution partial cement. The variations of waste glass aggregate used in this study were 2,5%, 7,5% and 12,5% as substitution partial coarse aggregate. And variation 0% silica fume and 0% waste glass aggregate. This research show that the maximum of compressive strength is 11,548 MPa in variation silica fume 20% and waste glass aggregate 2,5% (SF₂₀WG₂,₅). The maximum of permeability value in this study is 1.41 cm / s in the SF₀WG₀ combination or normal pervious concrete. And the lightest density is 1632,06 kg/m³ in variation 20% silica fume and 12,5% waste glass aggregate.

**Keywords:** Pervious concrete, waste glass aggregate, silica fume

 Indralaya, Juli 2019

Mengetahui, Diperiksa dan disetujui,

Ketua Jurusan Teknik Sipil, Dosen Pembimbing,

Ir. Helmi Haki, M.T. Ir. Sutanto Muliawan, M.Eng

NIP. 196107031991021001 NIP.195604241990031001