

## ABSTRACT

Concrete is one of the technologies commonly used in the field of construction. Concrete is often considered a technology that is not environmentally friendly. Concrete produces a lot of waste that cannot be degraded, the concrete waste can be found from building debris, tested concrete silinder, the waste of readymix concret etc. Waste concrete can be reused as an aggregate in new concrete mixes, but the use of recycled concrete in new concrete often results in decreased strength of concrete. To increase the strength of concrete can be overcome by using additional materials, one of the additives that can be used is the Viscocrete 3115 N. Superplasticizer type Viscocrete-3115 N has the effect of increasing the dilution of the concrete mixture and also accelerates the initial hardening of the concrete..

This study aims to determine the effect of the addition of Viscocrete 3115N superplasticizer from SIKKA to normal quality concrete on the slump value, compressive strength and tensile strength. The concrete used is concrete with a composition of 40% waste concrete as coarse aggregate and Viscocrete addition of 0.3%, 0.5% and 0.7% by weight of cement.

The results showed that the addition of Viscocrete 3115N to concrete with a composition of 40% coarse aggregate of concrete waste could improve all testing parameters. The addition of Viscocrete 3115N can increase the value of concrete slump by using 40% of concrete waste as coarse aggregate, with the highest slump value in Variation D of 204 mm. The addition of Viscocrete 3115N superplasticizer to concrete with a composition of 40% concrete waste as rough aggregate can increase the compressive strength and tensile strength of concrete. The highest compressive strength was found in the variation of C 27.92 MPa with an increase in compressive strength of 1.84 MPa or 7.07% higher than variation A. The tensile strength of concrete has increased along with the level of Viscocrete 3115N addition. The high tensile strength of concrete split is found in variations of mixture D with a split tensile strength of 2.9 MPa with an increase of 0.248 MPa or 9.16% variation A. While the ratio of tensile strength of split to compressive strength of concrete mix C variation is 10.29% variation of compressive strength C.

**Keyword:** waste concrete, Viscocrete 3115N, slump value, compressive strength, splitting-tensile strength