



ACN 109 200 900

## AUSTRALIAN SECURITIES EXCHANGE ANNOUNCEMENT

29 January 2016

### EDENCRETE™ - US UPDATE

## EDENCRETE™ ASTM C494 “S” 56 DAY TESTS CONTINUE TO SHOW ENCOURAGING RESULTS

**Eden Energy Limited (ASX: EDE)** is pleased to announce that the 56 day test results of the various tests of EdenCrete™ enriched concrete that are being undertaken by Eden Innovations in Colorado, to test EdenCrete™ in accordance with the standards and the procedures of ASTM C494 “S”, continue to show very encouraging results that correlate well with the results from various earlier tests that Eden and other third parties have carried out over the past twelve months.

ASTM C494 “S” certification is the industry standard certification procedure for specific performance concrete admixtures.

**The fifty-six days results produced the following results:**

- **41% increase in compressive strength at 56 days (ASTM C39)**
- **22% increase in split tensile strength at 56 days (ASTM C496)**
- **56% reduction in the rate of abrasion at 56 days (ASTM C105)**

A table of all the ASTM C494 “S” test results for EdenCrete™ to date is shown below as **Figure 1**.

ASTM C494 Results (Reported by Intelligent Concrete LLC)					
Test	% Increase of EdenCrete (4gal/yd. <sup>3</sup> ) over Reference Age (Days)				
	1	3	7	28	56
Compressive Strength (ASTM C39)	25%	35%	39%	41%	41%
Flexural Strength (ASTM C78)	N/A	25%	19%	32%	N/A
Split-tensile Strength (ASTM C496)	N/A	N/A	N/A	29%	22%
Abrasion Resistance (ASTM C779, Proc. C)	N/A	N/A	N/A	N/A	56%
Shrinkage (ASTM C157)	61% reduction				
Time of Set (ASTM C403)	Reduced Initial Set 3 min, Reduced Final Set 4 min				

**Figure 1 ASTM C494C – EdenCrete Test Results to 56 days**

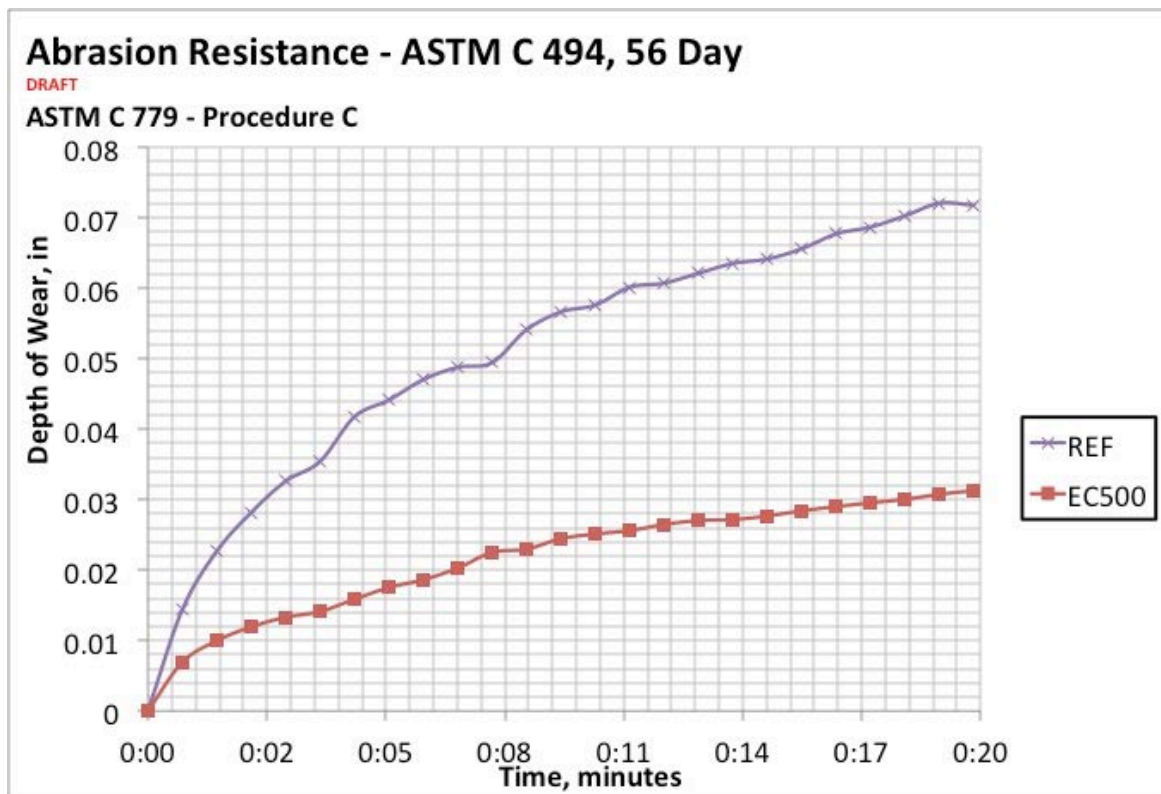
The reduction in the split tensile strength between 28 days and 56 days is considered to be within the normal range of variance that occurs between different concrete test beams.

In accordance with ASTM standards, the following further tests still remain to be undertaken in relation to EdenCrete™ to complete these ASTM C494 “S” Tests:

- Compressive strength - at 90 days, 180 days and 365 days.
- Abrasion resistance- at 90 days.
- Freeze/ Thaw – to be determined.
- Bulk Electrical Resistivity- to be determined.

## 56 Day Abrasion Resistance Results (ASTM C779, Proc. C)

The 56 day abrasion resistance test results (see **Figure 2** below), which recorded a 56 % reduction in the rate of abrasion, are very similar to the earlier abrasion resistance tests previously carried out both in Colorado and also in Georgia from the I-20 Field Trial undertaken with the Georgia Department of Transportation, further confirming the benefits that EdenCrete™ can deliver to concrete that is subject to high abrasion applications such as road and highway surfaces as well as the wide range of other applications where concrete is subject to heavy surface wear and abrasion.

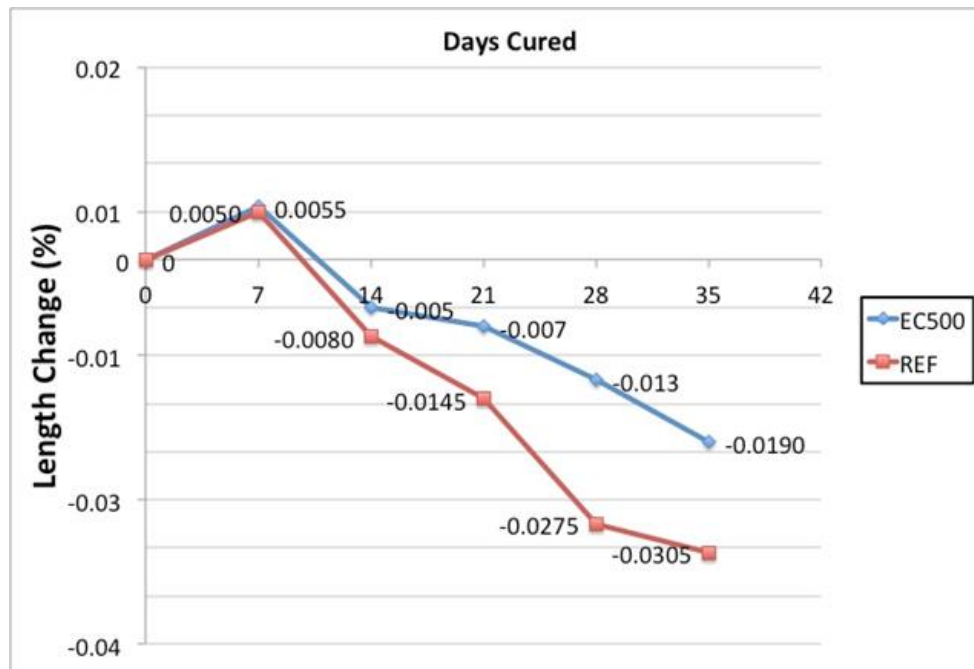


**Figure 2 ASTM C494C – EdenCrete Abrasion Resistance Test Results to 56 days (ASTM C779 C)**

### 35 Day Shrinkage Results (ASTM C157)

As reported earlier (ASX : EDE 13 January 2016) shrinkage is a major problem for all reinforced concrete as it results in cracking, which is particularly important on concrete bridge decks and the 61% reduction achieved in the shrinkage tests using EdenCrete™ is a very significant improvement and a highly encouraging result.

The progressive reduction in shrinkage delivered by the EdenCrete™ concrete throughout the 35 day period of the test (being the percentage difference in the change in length of the test beams) is shown in the **Figure 3** below.



**Figure 3. ASTM C494C – EdenCrete -Reduction in Shrinkage at 35 Days**  
(measured as the percentage change in length over time)

These ASTM tests, which are measured and reported by ASTM approved laboratories, are important as they provide the standardised industry method of assessing and comparing the benefits delivered by any particular admixture.

### BACKGROUND

*EdenCrete™ is Eden's 100% owned, proprietary carbon-strengthened concrete additive, one of the primary target markets for which is improving the performance of concrete used in the construction and maintenance of concrete roads, bridges and other infrastructure. Additionally, it has potential for use in a range of other applications including high-rise building construction, marine and coastal applications, water storage and pipelines, and pre-fabricated concrete structures and products.*

**Gregory H. Solomon**  
Executive Chairman