

## **The longevity of HA Cut CFL AF**

### **Method**

Samples of HA Cut CFL AF of 40 x 40 X 160 cm are prepared in confined conditions. A number of samples is stored at 80°C and a number of samples is stored at 60°C. The compression strength at the start of the test is measured. The intention of the storage at higher temperatures is to accelerate aging; 1 year after the start of the test the compression strength is measured on 2 samples stored at 80°C and on 2 samples stored at 60°C. If in both cases the compression strength has decreased a prediction of the service life of HA Cut CFL AF at lower temperatures than the test temperatures can be made using an Arrhenius equation. This document reports the situation after 344 days of aging.

### **Results**

The following table shows the compressive strength of HA Cut CFL AF at the start of the test on August 5 2010 and after 344 days storage at 60°C and 80°C.

	August 5 2010	344 days at 60°C	344 days at 80°C
Compressive strength (MPa)	10,2	10,7	10,5

### **Conclusion**

After 344 days storage at 60°C and at 80°C the compressive strength of HA Cut CFL AF has not decreased.

Based on this observation we confirm that the service life in a marine environment of HA Cut CFL AF will be at least 120 years.

The liability of Grace, and the Purchaser's exclusive remedy, shall be limited to Grace exchanging the HA Cut CFL AF for any HA Cut CFL AF found not in conformity to this warranty or (at Grace's option) repayment of up to the original purchase price of the defective membrane provided that Grace has received written notice of any claim within thirty (30) days of the discovery of the grounds for any claim and the claimant has paid in full for the supply of the defective materials. Grace shall not be liable for any other claims, including labor and other charges for installing replacement HA Cut CFL AF, howsoever arising and whether direct or consequential. All other warranties expressed or implied, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS, are hereby excluded.

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