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Statement of Durability for Adhesive Technologies Epoxies.

We are happy to confirm that West System Brand and our ADR range of epoxy resins have the durability to provide an effective water resistant membrane and adhesive with a life expectancy of at least 40 years in a marine environment.

We are fully confident in our epoxies performing to expectation over time when examining real world examples over the last 40 years. Below you will find clear evidence of their ability to continue to offer the performance required.

Examples of wooden composite boats, built using epoxy as both an adhesive and a water proof membrane, and with a working life of over 40 years old in both sea and salt water are still performing as well as the day they were launched.

For example, two early Bruce King designs: Whitefin, a 90' sloop, and Whitehawk, a 105' ketch, have been sailing the oceans of the world for 35+ years and they are still going strong. Several years ago we received word from the owners of Whitefin- the oldest of the two, saying the 2" diameter plug taken from the bottom of the hull (a new through hull fitting had been installed) looked and smelled like fresh wood.

RINA, another classification society, recognizes wood/epoxy construction as an excellent construction method.

Adagio, a 45foot timber composite epoxy sailing Multi Hull is now 43 years old, and is just about to start another Mackinac race in the US.

A very recent example using Marine certification is *Tenacious*, a 212' wood epoxy ship launched 12 years ago, built to Lloyds of London standards using WEST SYSTEM Epoxy. Epoxy was used to glue the hull laminations together as well as used to glue all of the frames and laminated timbers throughout the ship. It was also used to seal all wood considered structural throughout the ship. *Tenacious* is classified as a 50 to 100 year ship by Lloyds.

NASA designed wind blades built 30 years ago and designed for a minimum of 30 years' service, are still in service and are also perfect examples of structures built in these epoxies subject to the rigors of an extreme environment still performing to expectation.

There are many factors that affect the efficiency of epoxy adhesives. These include the type of substrates involved, their structural stability, porosity, surface preparation and susceptibility to moisture damage. In consideration of these factors the specification for the application of the resin system and its implementation will have a large bearing on its success or failure. Accordingly we cannot warrant our epoxy products as their performance is highly dependent on application and therefore subject to areas beyond our control.

Adhesive Technologies has not been involved in offering any advice regarding this particular application nor has it physically viewed the end result and can offer no guarantee to its success other than to say that if best building practices are applied to the specification and application of the product the epoxy systems are more than capable of providing adequate protection for extremely long periods.

