

# HexaMatrix™

Epoxy resin system for fiber reinforced composites



## Introduction:

Automobile and aircraft components are produced with metals such as aluminum and magnesium. The weight of these components limits mileage and with material costs increasing, manufacturers are looking for alternatives, like carbon fiber, that are stronger, safer, and more pliable.

HexaMatrix™ system can be applied in any fiber reinforced composite to improve mechanical strength, fiber wetting properties, moisture absorption, flow properties, durability, and chemical resistance.

## Markets:

### High Performance Sports Equipment



### Aerospace & Defense Components



### Automotive Components



### Marine Components



## Benefits:



**Mechanical strength**  
(24% stronger with 2 wt% of graphene)



**Improved flowability and wettability**



**Easy to sand and polish**



**Readily painted**



**Resistant to harsh chemical environments**

## Easy 2-Step Application

1. To use HexaMatrix™ slowly mix part A (epoxy resin) with part B (hardener) until the resulting material is uniform, according to the following mixing ratios:

**Weight mixing ratio:** 100 grams / 22 grams

**Volume mixing ratio:** 100 ml / 27 ml

2. HexaMatrix™ recommended curing cycles consist of a first stage of 24 hours at room temperature (RT), followed by a secondary stage.

Check the following table for curing cycles:

24 h @ RT + 24 h @ 40°C	24 h @ RT + 16 h @ 60°C	24 h @ RT + 8 h @ 80°C
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### Disclaimer:

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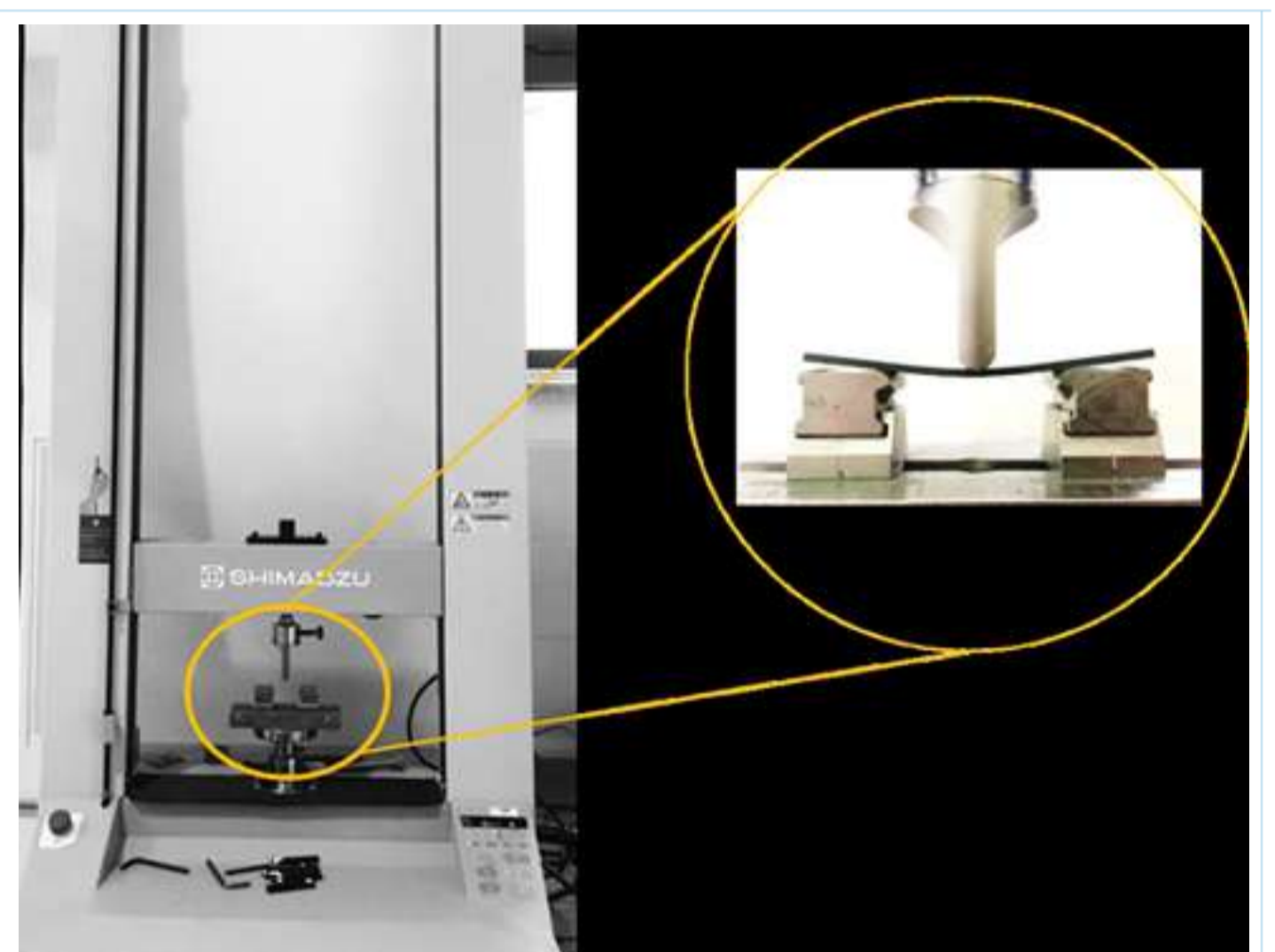
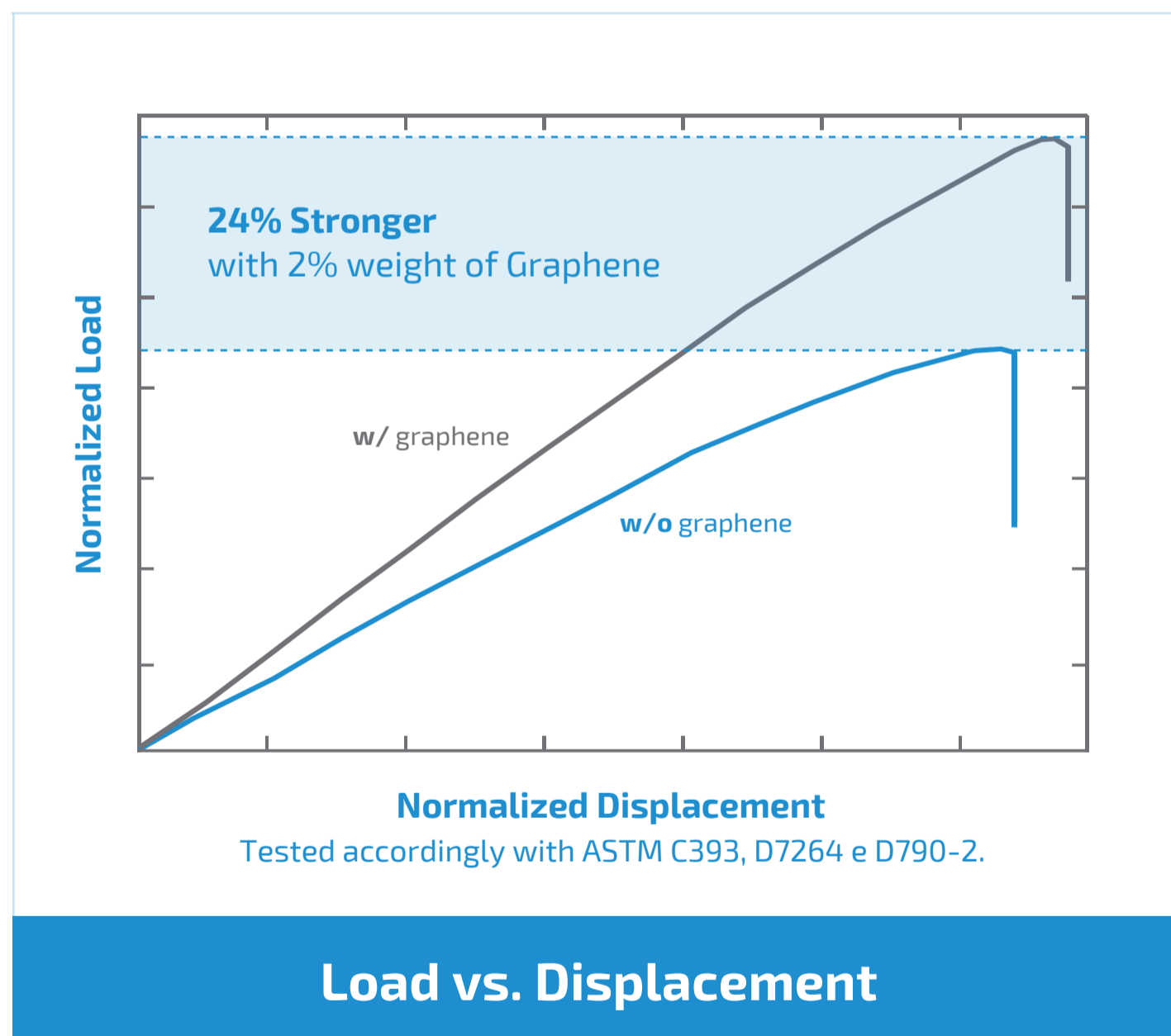
## Technical Info HexaMatrix™ Epoxy resin system for fiber reinforced composites

### ASTM | Testing

HexaMatrix™ increases the strength of carbon fiber composites up to 24% while simultaneously reducing weight by 10%. Our innovative system saves cost by enabling the reduction of the number of fiber layers required to maintain integrity and mechanical strength of manufactured products.

Our Graphene-loaded epoxy resins are also resistant to moisture and corrosion and withstand high temperature and pressure conditions.

### Confirmed improvement in composites | Flexural Strength



**Graphene reinforcement of carbon fibre**

Graphenests key enabling technology provides low cost, environmentally friendly graphene-based solutions. This allows the application of graphene to a wide range of manufacturing industries including aerospace & defense, automotive, packaging, marine, sports & protective equipment, and biotech.