INFUSION
ENGINEERING DATA

KINETIX® R118
SYSTEM TYPE: **INFUSION**

KINETIX R118 is a very low viscosity epoxy resin specifically formulated for use with H118 and H103 hardeners which are both suitable for most infusion processes, including SCRIMP, VARTM and RIFT.

H120 provides a long pot life, room temperature de-mouldable system. Optimum mechanical and heat distortion properties are achieved with post cure. In comparison, H103 will provide a longer pot-life and higher heat distortion (HDT), however, the system does exhibit brittle behaviour prior to post cure and will require post-cure (minimum 50°C) at elevated temperatures to obtain optimum mechanical and distortion properties.

The low viscosity of both systems enhances fibre wetting, enabling the production of high strength, void-free laminates that have excellent moisture resistance. Typical applications are the fabrication of parts requiring high strength and lightweight such as high performance yachts, masts, kayaks and sporting equipment.

MIX RATIO
100 Parts Resin to 25 Parts of H120 Hardener - By Weight
100 Parts Resin to 25 Parts of H103 Hardener - By Weight
Note: Care should be taken when dispensing and mixing. Do not attempt to control the cure time by altering the hardener ratio. Contact ATL Composites for specific information.

TYPICAL CURED RESIN MECHANICAL PROPERTIES

*Neat Cast Sample** *Post Cure - 16 hrs @ 40°C*	**R118 / H120**
TEST METHOD	**RESULTS**
Tensile Strength	71 MPa
Tensile Modulus	3079 MPa
Flexural Strength	115 MPa
Compressive Strength	100 MPa
Compressive Modulus	2586 MPA
Shore D Hardness - 1 Day	69
2 Weeks	84
HDT	57°C

TYPICAL CURED RESIN MECHANICAL PROPERTIES

*Neat Cast Sample** *Post Cure - 16 hrs @ 40°C*	**R118 / H103**
TEST METHOD	**RESULTS**
Tensile Strength	80 MPa
Tensile Modulus	3271 MPa
Flexural Strength	115 MPa
Compressive Strength	105 MPa
Compressive Modulus	3137 MPa
Barcol Hardness	30
HDT	69°C

Typical Infused
WR E-GLASS Laminate *Post Cure - 16 Hrs @ 50°C

TEST METHOD	**RESULTS**
Fibre Fraction	73% w/w
Tensile Strength	365 MPa
Tensile Modulus	23881 MPa
Flexural Strength	551 MPa
Flexural Modulus	18441 MPa
Compressive Strength	300 MPa
Compressive Moduls	20200 MPa

HEALTH AND SAFETY

KINETIX R118 and associated hardeners have moderate sensitising potential, and should be kept out of the eyes and off the skin.

• Use with good ventilation and appropriate safety equipment including impervious gloves and safety glasses.

• If skin contact occurs, remove contaminated clothing immediately and wash the affected area thoroughly with water, avoiding the use of solvents except in the case of massive contamination.

• If eye contact occurs, immediately flush with running water or at least 15 minutes and seek medical advice.

• If swallowed:
Resins - DO NOT induce vomiting, and contact a doctor or the Poisons Information Centre.

Hardeners - DO NOT induce vomiting, give plenty of milk or water and contact a doctor or the Poisons Information Centre.