

KINETIX R246 is a solvent free, low viscosity epoxy resin specifically formulated for use with H124 hardener to cure at room temperature, or low elevated temperature, and is suitable for fibre composite boat construction.

The low viscosity of this system is an aid in both, hand lamination or impregnation machine operations. The relatively low activity of R246 offers extended working times *which is another benefit for large laminating projects.

* In comparison with R240 resin, R246 mixed with associated amine hardeners, will produce significantly longer working times, typically in the order of 100%.

Cured mechanical properties are excellent. Notably, the cured HDT (heat distortion test) with each hardener is raised some 5-10°C. Toughness is retained.

UNCURED PROPERTIES

	R246	H124
Physical State	Clear Liquid	Pale Yellow Liquid
Specific Gravity g/ml @ 25°C	750-900	66
Viscosity mPas @ 25°C	1.14	1.01

CURE CHARACTERISTICS

	H124
Pot Life -100g @ 25°C (in air)	20 min
Mix Viscosity mPas @ 25°C	392
Shore 'D' Hardness - 24h @ 25°C	78°C
- 24 hrs @ 25°C + 8h @ 60°C	82°C
Glass Transition Temperature (Tg)	
40 min @ 75°C	64°C
20 min @ 80°C	56°C
10 min @ 90°C	56°C
8 hrs @ 80°C	76°C
8 hrs @ 80°C + 2 hrs @ 100°C	80°C

MIX RATIO

25 parts hardener to 100 parts resin 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.

MECHANICAL PROPERTIES*

	R246/H124
Tensile Modulus	2898 MPa
Tensile Strength	73 MPa
Tensile Elongation	9.7%
Flexural Strength	116 MPa
Flexural Modulus	2941 MPa

* 24 hrs @ ambient + 8 hrs @ 80°C

MONITORING OF CURE

A laminator wishing to monitor progress of cure has a number of on the spot options open to him. Small test aliquots of mixed resin can be placed in waxed lids during lamination. These should be subjected to the same cure conditions as the actual laminate, and later compared with standard samples which are known to be fully cured.

The samples should be flat on the bottom and approximately 2 to 3 mm thick. Allowance should be made for the possible effect of foam core insulating the curing resin, and reducing the cure of the inner layer.

A better alternative means of comparison is to meter the development of Heat Distortion Temperature (HDT) by immersing the aliquots in a vessel of warming water and noting the temperature at which the resin becomes rubbery. Providing sample thickness is kept constant, this simple technique gives surprisingly reproducible results.

CAUTION

When cured these resins, like all plastics, undergo a transition to a rubbery state when heated above their HDT. Operators should be constantly aware that a partly cured resin will not have developed full HDT, and that components should not be heated above this temperature when they are not supported by vacuum and a mould. Be aware, for example, that heating will cause a considerable build up of pressure in gases in a low density core, and this will always tend to lift a laminate.

Care should also be taken to avoid heating unsupported laminates above the HDT of bonding resins and foam cores.

CALCULATING RESIN/HARDENER FOR A FIBREGLASS LAMINATE

As a rough rule for the amount of resin/hardener required to achieve proper wetting out and consolidation of a laminate, use a 1:1 ratio of fibreglass weight per m² to resin/hardener weight, plus wastage

e.g. 1m² of 600gsm biaxial E-fibreglass will require 600grms of mixed resin and hardener + a 10% wastage factor.

PACK SIZES				
Order Code		Order Code		PACK
Resin		Hardener		
RC 246	4 kg	HC124	1 kg	5 kg
RD 246	18 kg	HD124	4.5 kg	22.5 kg
RF 246	192 kg	HF124	48 kg	240 kg

STORAGE

KINETIX R246 resin and H124 hardener will keep for 2 years if kept in original containers at room temperature (15°C to 32°C), and out of direct sunlight. Containers should be tightly sealed to prevent moisture absorption.

HEALTH AND SAFETY

KINETIX R246 and H124 hardener have moderate sensitising potential, and should be kept out of the eyes and off the skin.

- Use with good ventilation and adequate 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 for at least fifteen (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.

NOTE Our products are intended for sale to industrial and commercial customers. We request that customers inspect and test our products before use and satisfy themselves as to contents and suitability. Nothing herein shall constitute a warranty, express or implied, including any warranty or merchantability or fitness, nor is protection from law or patent to be inferred. All patent rights are reserved. The exclusive remedy for all proven claims is replacement of our materials and in no event shall we be liable for special or consequential damages. 15.08.18

