

Wessex 4301

(UW 43 LV)

UNDERWATER EPOXY

Technical Data Sheet

DESCRIPTION

Wessex 4301 is a two-component epoxide based composition of low viscosity which was developed for laminating applications, but also has excellent adhesion to GRP and other substrates. The epoxy system possesses very good wetting-out characteristics even at low temperatures and will produce strong bonds when used in hostile environments.

MIXING

Method	Resin : Hardener
	Part A : Part B
by Weight	1 : 1

The yellow low viscosity epoxy resin ("Part A") is mixed with the blue low viscosity hardener ("Part B"). Before use, stir the epoxide resin and hardener separately to ensure complete dispersion of the colouring pigments. The two components are then blended thoroughly together and the differently coloured materials provide a visual aid to complete mixing. This is indicated when the mixed epoxy is a uniform green colour, but to ensure complete homogeneity a further two minutes mixing is recommended after the uniform colour is achieved.

Keep containers closed when not in use to avoid contamination.

STORAGE

System 4301 Parts A and B should be stored in a warm dry environment where a temperature of between 10°C and 30°C can be maintained. To avoid "skinning" of the hardener component after use it is recommended that the polythene film is replaced in intimate contact with the surface of the material. Keep containers closed when not in use to avoid contamination.

USABLE LIFE

When the resin and hardener are mixed the gel time of a 500g batch of Wessex 4301 is approximately 50 minutes at 20°C and should therefore be used immediately after mixing.

SURFACE PREPARATION

Although Wessex 4301 is tolerant of some contamination and moisture, the optimum results are obtained on prepared surfaces. Ideally, surfaces should be abraded to provide the maximum mechanical key and be free from grease, moisture and dust particles. These contaminants may be removed by a solvent wash. If glass fibre laminate forms part of an underwater primary or otherwise

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important structure, such as a hull or dome, preparation should be confined to abrasion of the resin alone and the glass should not be exposed.

When the adhesive is used to make an emergency repair, it will not always be possible to make ideal surface preparations and, in some cases, the effectiveness and/or durability of the bond will be impaired. Decisions regarding surface preparation must be taken on site dependent upon the situation in hand, but advice can always be obtained from Wessex Resins & Adhesives Limited.

COVERAGE

When laminating and used in conjunction with glass cloth this epoxy composition will cover approximately 2.0 to 3.0 square metres per kilogram dependent upon the type and weight of glass cloth.

APPLICATION

Wessex 4301 is primarily a laminating resin and when using glass fabric we would recommend the wet method of application as described below:

1. Coat the substrate with the resin/hardener mixture at a rate of 3 to 4 square metres per kilogram.
2. Work the glass cloth into the epoxy with the aid of a paddle roller or similar tool. Re-apply the epoxy to dry areas of the cloth and then "roll" another layer of fabric into the composite, wetting out any dry areas. Continue this laminating work until the desired thickness is achieved.
3. When the desired thickness of the laminate has been constructed apply one protective coat of epoxy at the standard rate of 4 to 5 square metres per kilogram.
4. Allow 6 hours at 18°C to 20°C for the epoxy/glass composite to reach an initial cure, but the epoxy will reach its full and maximum properties after 7 days.

NOTE: When laminating, if more than 16 hours at 18°C to 20°C elapses between applications of the epoxy, then the surface should be lightly abraded, taking great care not to damage the glass fabric. The recommended method is to lightly abrade the surface using wire wool in conjunction with a household scourer (such as Jif). Wash and ensure the surface is clean and dry before applying further coats of epoxy.