



# UROXSYS LIMITED



URETHANE & EPOXY SYSTEMS, DEVELOPMENT & MANUFACTURE

## TECHNICAL DATA

### ECS LA 6337

### EPOXY RESIN SYSTEM

**DESCRIPTION** ECS LA 6337 is a low-allergenic, two-component epoxy system formulated to bond to wood, glass reinforcing and other common laminating composite materials.

**FEATURES**

- \* Good substrate wetting characteristics
- \* Low sensitising properties, minimising allergy development
- \* Relatively short thin film cure time, enabling rapid laminate fabrication
- \* Blush resistance to humid conditions
- \* Medium cure rate for larger pours and more handling time.

#### INTENDED USES

- \* Structural adhesive
- \* Sheathing system
- \* Casting and electronic encapsulation.

#### MIXING:

The resin & hardener components must be accurately measured and thoroughly mixed.

Mix ratio is 63 parts resin to 37 parts hardener, which equates to 1.7 parts resin to 1 part hardener.

A spreadsheet scheduling required component weights to make a given volume of mix is available from Uroxsys on request..

Mix well with a broad-bladed stirrer ensuring that product on the sides and bottom of the mixing container are drawn into the mix. Inadequate mixing will lead to an inconsistent mix.

#### RECOMMENDATIONS FOR USE:

##### STRUCTURAL ADHESIVE

A thickening agent must be added to the system to increase viscosity and ensure adequate "wet out" is achieved (ie, Uroxsys F12). Use sufficient to gain a 'gel', unthickened epoxy will leave the joint dry.

The type of thickening agent used should produce thixotropy (i.e. resistance to flow) without increasing the viscosity excessively. To this end the fumed silicas have been used extensively in the past, but with recent advances in asbestos-free fibres it is now possible to obtain a thixotrope with the advantages of reinforcement and ease of dispersal.

As these two types of thixotropes differ in efficiency, it is recommended that advice from the thickener supplier be sought for application technique.

Do not clamp epoxy adhesive with too much pressure. It is necessary to ensure there is sufficient glue in the joint, which is then held immobile by light clamping during the curing period.

## **SHEATHING SYSTEM**

Incorporating reinforcing materials such as glass cloth in the epoxy coating of timber craft provides strength, impact and abrasion resistance. Such reinforcement should be used for all surfaces below the water line, and on decks.

Surfaces must be clean and dry, and any irregularities, holes or sharp corners filled or filleted.

Precut glass to easily handled sizes, and coat surface with ECS LA 6337 using a brush or roller.

If using 6oz cloth, allow 2 square metres per litre of binder. In general, you need to use between 2.2 and 2.5 times the glass reinforcing weight per square metre for proper wet out.

Apply the fibreglass to the wet surface and push it into the binder using normal fibreglass application tools. The cloth when properly wet will become transparent whilst areas not impregnated retain the dry cloth appearance. These dry areas require more binder.

With successive laminations the build can be increased to any desired level.

Upon obtaining the required build, the binder is allowed to cure and then sanded to remove protruding "glass hair" and the surface glazed with unfilled resin/hardener mix.

The final coat should consist of a high quality UV resistant paint. Refer to **UROXSYS** for recommendations.

## **ENCAPSULATION AND CASTING:**

The relatively low exotherm and cure rate of ECS LA 6337 allows more time for mixing, placing and de-aerating.

## **CAUTIONS:**

### **MOISTURE**

The cure of epoxy products can be affected by moisture, which reacts with the hardener to give a surface "bloom".

This blooming can give a permanent loss of gloss, less than normal chemical and physical resistance at the surface, and affect inter-coat adhesion if over-coated.

Take all reasonable steps to minimise the risk of water, moisture, or excessive humidity exposure during the cure period (which may be several days in cold temperatures).

### **HYGIENE:**

Wear protective clothing, gloves are essential. Avoid contact with exposed skin. Before commencing work apply a barrier cream.

**TEMPERATURE:**

Do not use this product at ambient temperatures lower than 10°C, as full strength will not develop reliably below this temperature.

Epoxy resins used in the manufacture of this product may thicken and crystallise over time at low storage temperatures. The product should be stored at not less than 10°C. If cold temperature crystallising occurs, it can be simply reversed by reconditioning the resin component by raising the temperature of the product to at least 35°C overnight, and thoroughly mixing with a power mixer whilst hot. Heating can be done by standing the unopened containers in a small room with a thermostat-controlled electric heater, or by standing the pails in very hot water. Contact Uroxsys for specific advice.

This information is, to the best of our knowledge true and accurate, but any recommendations or suggestions which may be made are without guarantee, since the conditions of use are beyond our control. Furthermore nothing contained herein shall be construed as a recommendation to use any product in conflict with existing patents covering any material or its use.

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