



TIMBABUILD®

The Lifetime Solution

EPOXY RESIN STRUCTURAL REPAIR SYSTEM

TECHNICAL GUIDE 1.01



 **MADE IN
BRITAIN**

**GUARANTEED FOR
50 YEARS**

Epoxy Repair iQuip® Timbabuild®

GUARANTEED FOR 50 YEARS

There is a sea change being experienced in today's world; a drive for more sustainable products that work in harmony with the natural world and traditional methods.

Sustainability covers many different facets of a building. For iQuip® Timbabuild®, it means retaining original features, and restoring back to life the original character of a property. Repairing original features is all well and good, but those repairs must be cost-effective, from the point of view of expense, time and durability.

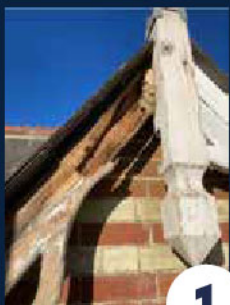
iQuip® Timbabuild® is the only epoxy wood repair system which provides a 50 year guarantee on repairs when performed correctly.

iQuip® Timbabuild® EHB60 rebuilds large areas of decayed structures quickly and effectively. By removing the rotten wood, priming the surface, and then building up and moulding the surface, similar to a putty consistency, the hardened epoxy can be sanded or planed exactly like wood to provide the perfect finish. It provides a physical and chemical bond which is stronger than the original wood.

iQuip® Timbabuild® ERC10 is the ultimate in wood adhesion. Used most effectively as a splicing adhesive, it allows new sections of wood to be installed with ease, and provides a permanent and watertight seal.

iQuip® Timbabuild® will also resist any shrinkage or movement in the joint area which means it moves together with the natural movements in the wood.

A Simple 5 Stage Process



1. Remove decayed and rotten wood back to good wood. Check moisture level <18%
2. Using **EWS** epoxy primer, generously brush apply to the repair area and leave to soak for 20 minutes.
3. Butter the repair surface with **ERC10** & splice in new sections of timber, back filling with **EHB60**.
4. After the curing period, either apply **FINISH** and sand, or sand back using hand or mechanical sanding.
5. The final repair is ready to be primed and painted (or just painted) with any known paint system.

Epoxy Repair iQuip® Timbabuild®

GUARANTEED FOR 50 YEARS

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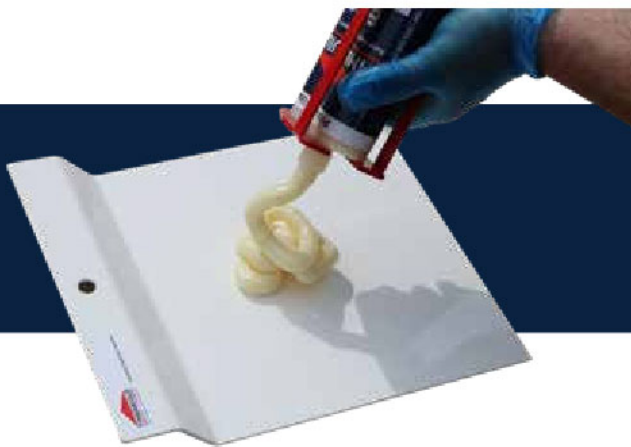
ASSESS THE REPAIRS

2



REMOVE AND PRIME

3



EXTRUDE, MIX TO ONE COLOUR AND FILL



4

SAND AND PAINT



5

Epoxy Repair iQuip® Timbabuild®

GUARANTEED FOR 50 YEARS

iQuip® Timbabuild® Epoxy products have very distinct characteristics. Epoxy products of this nature work by combining an A and B component, very thoroughly, and in as equal proportion as possible. Unlike other fillers, the working time is extended to allow for more detailed and larger repairs to be carried out.

The key benefits of iQuip® Timbabuild® over alternative repair methods are detailed below;

Overall Benefits

iQuip® Timbabuild® is manufactured 100% in the UK

- Manufactured to ISO 9001 / 14001 Standards (Environmental Quality Standard).
- The single 'twin-tube' system ensures a 100% accurate mix of A and B components.
- The repair is guaranteed for 50 years - Peace of mind. (Provided the correct repair process is followed)

Benefits of the System

iQuip® Timbabuild® EHB60 allows large scale repair works to be undertaken unlike normal fillers.

iQuip® Timbabuild® ERC10 provides a bond which is stronger than wood, in just 60 minutes.

iQuip® Timbabuild® will not shrink, crack, or absorb water.

iQuip® Timbabuild® will move in harmony with the wood to ensure longevity.

Project Examples

PROJECTS FROM AROUND THE WORLD



Kew Uniting Church, Australia



Cross Keys Hotel, Kelso, Scotland



United Reformed Church, Lower Hopton, Mirfield



Window Repairs, Australia

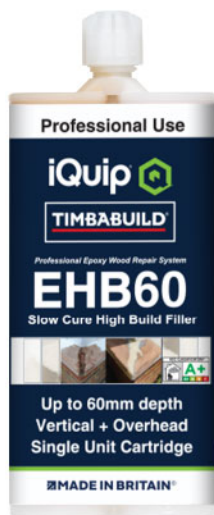
iQuip® Timbabwe® EHB60

EPOXY HIGH BUILD



Product Code 38EHB60

iQuip Timbabwe® EHB60 is used for all types of repair, due to its consistency it can be used in vertical and overhead areas, and can be shaped and moulded to the original feature shape, using either plastic sheets, bags, or by being sculpted into shape.



PRO TIP

A Proper Lasting Replacement Of Builders Bog

This will not absorb water, and won't shrink as it contains no styrene. Neither will it crack or fail in time to come.

Main Benefits

- 30 mins working time (+20°C)
- 4 Hour curing time (+20°C)
- Used up to 60mm, or to any depth with packing / inserts
- May be moulded to any shape
- Application Temperature +5 to +35°C
- May be coloured with any oil-based colourant or oxide powder.
- No slump, shrinking or cracking - water resistant.
- VOC A+ & LEED Approved
- Styrene-free

Product Code	Description	Carton Quantity	Scannable Barcode
38EHB60	iQuip Timbabwe EHB60 Epoxy Filler	10	 5 018567 905190 >

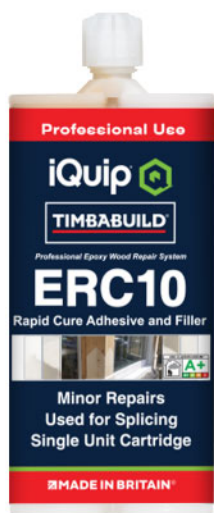
iQuip® Timbabwe® ERC10

EPOXY RAPID CURE



Product Code 38ERC10

iQuip Timbabwe® ERC10 is a fast setting adhesive which is used down to as thin as 1mm for splicing new wood sections. Used predominantly in the sash window repair industry due to its speed of curing and ease of use.



PRO TIP

Rapid Cure Adhesive Suitable For Splicing In Timber

Main Benefits

- 5 minutes working time (+20°C)
- 1 Hour curing time (+20°C)
- Used up to 10mm, for repair work.
- Used down to 1mm
- Application Temperature +5 to +35°C
- May be coloured with any oil based colourant or oxide powder
- No slump, shrinking or cracking -water resistant.
- VOC A+ & LEED Approved
- Styrene-free

Product Code	Description	Carton Quantity	Scannable Barcode
38ERC10	iQuip Timbabwe ERC10 Epoxy Adhesive and Filler	10	 5 018567 120074 >

iQuip® Timbabuild® EWS

EPOXY WOOD STABILISER



Product Code 38EWS

iQuip Timbabuild® EWS is the primer which is used with both EHB60 and ERC10 as a brush applied epoxy solution which has two actions - to prepare the bare wood fibres for the repair resin causing them to protrude and aid adhesion, and to prevent any future water attack in the wood.

PRO TIP

A necessary primer before using EHB60 or ERC10 to ensure a bond, and be eligible for a 50 Year Guarantee. Not required for use of FINISH Filler. Always remove damaged and rotten wood before a structural wood repair.



Main Benefits

- 20 minute soak period - repair ready
- Brush applied onto bare (good) wood.
- Easy mix bottle for 100% accuracy
- Application Temperature +5 to +35°C
- Essential primer for any repair.
- VOC A+ & LEED Approved

Product Code

38EWS

Description

iQuip Timbabuild EWS Wood Primer

Carton Quantity

4

Scannable Barcode



iQuip® Timbabuild® FINISH

FINE SURFACE FINISH



Product Code 38FIN300

iQuip Timbabuild® FINISH is used for all types of repair, as a final easy to sand top coat which completely fills in any small imperfections which may have been left in the repair process. It is also used as a minor repair filler in its own right.

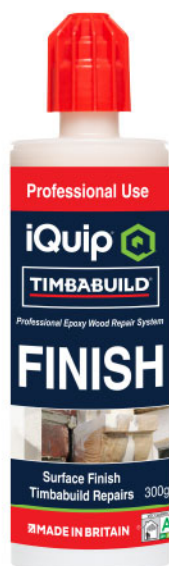
PRO TIP

A must-have for every painter.

Use as a stand-alone filler for example to fill nail heads with one pass (and no need for a second as won't shrink) and is easily sanded and painted rapidly after application saving time and delivering a superior long-lasting outcome.

Main Benefits

- 30 Minute Curing period
- Used as a fine finish resin
- Use with any silicone tool.
- Application Temperature +5 to +35°C
- A two part filler in its own right
- 300g foil bag system for easy and fast extrusion.
- Versatile and Easy.
- VOC A+ & LEED Approved
- Styrene-free



Product Code

38FIN300

Description

iQuip Timbabuild Finish 300g

Carton Quantity

15

Scannable Barcode



Timbabuild® Timbaglaze

GLAZING PUTTY REPLACEMENT



Product Code 38GLAZE

Timbabuild® Timbaglaze Putty replacement is the only genuine all weather use Multi-Purpose Glazing Sealant. A single component hybrid polymer specifically designed for bedding in any type of glazing unit indoors or outdoors.



PRO TIP

Replaces Linseed Putty, paintable within 1 hour

(not 2-3 weeks) and also a lot easier to apply than linseed putty.

Main Benefits

- Paintable after 1 hour (+20°C)
- Skins over in 20 minutes
- May be applied to WET or DAMP surfaces
- Suitable for use with Butyle tapes & hot melt adhesives in double glazed units
- Used in Renovation contracts to restore listed buildings.
- Paintable with all known paint types.
- No shrinkage - maintains a strong elastic bond.
- VOC A+

Product Code	Description	Carton Quantity	Scannable Barcode
38GLAZE	iQuip Timbaglaze Multi Purpose Glazing Sealant	12	 5 018567 135092

A Simple 5 Stage Process



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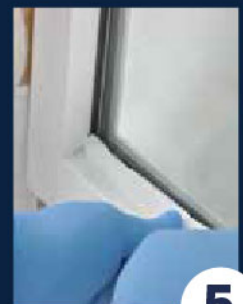
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3



4



5

1. Cut the threaded end at an angle of about 45° so that there is a suitable opening for application.
2. Place the cartridge in a high quality caulking gun (the iQuip Caulking Gun is recommended).
3. Sand the surface to remove debris, and aid adhesion of the product to the joint.
4. Use masking tape if necessary, apply a bead to the joint in a uniform fashion.
5. Smooth off using an appropriate tool or a moist finger - may be painted or primed after just 1 hour.

iQuip® Extrusion Tool 400

FOR USE WITH ERC10 AND EHB60

iQuip 400ml Extrusion Tool which is used with both EHB60 and ERC10 is strong and durable.



Main Benefits

- 26:1 Thrust Ratio with 4mm Stroke for High Viscous Products
- Ergonomic & Smooth Lever Mechanism For Ultimate Control
- Patented Impact-Resistant Recoil Mechanism Cover For Enhanced Durability
- Maximum Force of 500kgf (4.9kN)
- Suited for dispensing iQuip TimbaBuild products & much more

Product Code	Description	Carton Quantity	Scannable Barcode
22ET400	iQuip 400ml Extrusion Tool	10	 9 341229 108773

iQuip® Timbabwe® Basic Starter Kit

BASIC KIT WITH CARDBOARD CASE

Timbabwe® Basic Starter Kit is a handy starter kit contains all of the elements required to carry out professional timber refurbishments, and neatly stores them in this compact and hard wearing recyclable cardboard box.



CONTENTS

- 1 x ERC10 400ml Rapid Adhesive
- 1 x EHB60 Epoxy Filler
- 1 x EWS Epoxy Primer
- 1 x iQuip 400ml Extrusion Tool
- 1 x Timbabwe 290ml Hybrid Polymer Glazing Sealant / Putty Replacement
- 1 x Pair of OctaGrip Gloves
- 1 x Ergonomic iQuip Scraper 76mm

Product Code

Description

Carton Quantity

Scannable Barcode

38BASKIT

Timbabwe Basic Starter Kit

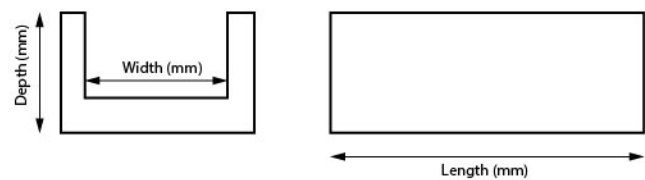
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Gelling & Curing Times

ACCORDING TO MASS & TEMPERATURE

Indicative Gelling and Curing Times



iQuip® Timbabuild® ERC10

Typical Hardening Time*

BASE MATERIAL TEMPERATURE (°C)	35	25	15	5
TYPICAL GEL TIME (mins)	4	5.5	7	15
TYPICAL CURE TIME (mins)	30	35	55	70

*This is the typical gel time for 100g of mixed product & cure time for a 90ml mass. Cure time also based on 100g of product, to reach 50 on shore D hardness.

iQuip® Timbabuild® EHB60

Typical Hardening Time*

Curing Times (Hrs)						
Sample Size (cm)			Temperature (°C)			
Thickness	Width	Length	5	15	25	35
6	3	10	25	4	3.5	3
2	3	10	30	8	4	3
1	3	10	32	10	4	3.5
0.5	3	10	35	12	4.5	4

Wood may absorb a stain differently to the filler.
We would always advise use of a test panel when working with stains and varnishes.



Working Procedure

CORRECT METHODS FOR SUCCESSFUL REPAIRS

These procedures are designed to ensure that this product is used in the correct way to ensure its maximum effect on any given repair application. Careful and thorough observation of the product working procedures will provide total satisfaction and a durable and desirable finish.

PPE when working with Timbabuild®

To prevent skin sensitisation, which can sometimes occur when working with epoxy based products, we recommend operatives wear nitrile rubber gloves and that hands are washed thoroughly with soap and water after working with Timbabuild® products.

Safety goggles should be worn when routing out damaged timber, and for sanding down Timbabuild® and joinery units in preparation for over-painting. Dust masks should be worn when sanding down using power tools.

Safety helmets should always be worn when working on ladders or with scaffolding.



Recommended Tools

1. Approved Routing Tool to remove damaged timber / or hammer and chisel.
2. Perspex mixing board to mix EHB60 or ERC10.
3. Set of three mixing knives or decorators scraper to mix and apply resin.
4. Plastic cup or similar to mix 2:1 ration EWS formulation.
5. Disposable brushes, for EWS application.
6. Nitrile gloves hand protection.
7. Timbabuild® extrusion tool.
8. Solvent-free dry wipes for cleaning hand tools.
9. Electronic moisture meter.
10. Abrasive sanding paper various grades 40-120 grit.
11. Hot air blower for drying out affected surfaces.
12. Perspex pieces for shuttering on repairs when using on certain repairs.

Working Procedure

CORRECT METHODS FOR SUCCESSFUL REPAIRS

iQuip® Timbabuild® EWS (Epoxy Wood Stabiliser) is supplied pre-measured in two small plastic bottles at a ratio of 2:1. One bottle contains the base component the other contains the activator.

Small amounts may be prepared using the built-in measuring chambers. Having first removed all of the decayed timber and establishing that the moisture content of the timber is less than 18%, the products should be mixed thoroughly and applied to the repair area liberally using a disposable brush.



General Preparation - Ambient temperature must be above 5°C

Ensure the correct PPE is worn at all times.

Remove paint at least 10mm from around the area to be treated.

Remove all decayed timber using a router or chisel. Clean and sand inside the routed areas to remove all loose fibres.

Ensure the moisture content is no higher than 18% using a standard moisture meter.

If the moisture content is too high, apply heat using a heat gun to the affected areas at 60- 80°C, until below 18%.

Mix the two components of EWS together in an accurate 2:1 ratio.

The mix should be applied immediately & liberally to the repair area, using a disposable painting brush.

Leave for minimum 20 minutes or until tacky to allow full penetration.

ERC10 / EHB60 must be applied within 4 hours before the EWS hardens.

Working Procedure

CORRECT METHODS FOR SUCCESSFUL REPAIRS

iQuip® Timbabuild® ERC10 & EHB60 are specialist epoxy formulations, both variants are supplied in a 1:1 ratio of resin and hardener. The extrusion tool and cartridge are specially designed to ensure that a very accurate amount of resin and hardener are extruded, however subsequent mixing on a flat board is essential to the proper curing and ultimately the strength and longevity of the repair.



Extruding & Mixing

Ensure the correct PPE is worn at all times.

Insert the single unit ERC10 / EHB60 cartridge, label side up, into the Timbabuild® extrusion tool

Extrude the 1st 5cm of resin to waste. Then extrude the required amount of material onto a flat perspex board. Release trigger back pressure after extrusion.

Immediately commence mixing using a wide blade scraper or knife.

It is imperative that the mixture is entirely lifted from the board at least once during mixing.

Once a homogeneous mix is achieved, use the filler within the working time, typically around 5 minutes for ERC and 20 minutes for EHB60. Avoid air pockets when applying the filler

Tools and utensils can be cleaned using wipes, within the gelling period. After the gelling time, the material can only be removed using mechanical means.

Working Procedure

CORRECT METHODS FOR SUCCESSFUL REPAIRS

iQuip® Timbabuild® is used to either build up and mould to shape, to fill gaps and voids, or for splicing in new wood sections. These specific work instructions are described later.

Below is a general guide to applying Timbabuild to any repair.



Application

Apply using a wide blade scraper.

Take care to completely fill all open voids.

Mould the filler to the approximate shape using the knife.

Always leave the repair slightly proud of the surface.

EHB60 can be easily moulded and shaped and used to depths of up to 60mm in a single layer, there is no restriction on length of repair.

For deeper repairs, pieces of softwood can be used to pack the inside of the repair area.

Apply EHB60 or ERC10 to a repair, in one cure period only – Once cured, use Timbabuild Finish for any imperfections, Do not re-apply EHB60 or ERC10 over a cured repair.

Working Procedure

CORRECT METHODS FOR SUCCESSFUL REPAIRS

iQuip® Timbabuild® ERC10 & EHB60 once cured, display the same characteristics, in that they may be sanded, planed, screwed, drilled and over-painted. Also, due to their excellent adhesive qualities and flexibility they will “move” with the surrounding timber. Both formulations are effective with all known primers both solvent and water based and all-known paint and varnish finishes, including linseed oil paint, often used in heritage projects.



Finishing & Painting

The repair must be fully cured.

Surface voids or gaps may now be perfected using Timbabuild® FINISH, and allowed to cure for approximately 20 minutes.*

Sand the surface flat using a 40-60 grit abrasive paper, and finishing with 120 grit.

Electric sander must exercise caution, not to overheat the surface.

Remove all dust and fine debris with a damp cloth and allow to dry.

Apply any paint primer / undercoat or gloss paint system.

Please ensure all steps have been carefully adhered to, particularly sanding, before applying the primer and final paint finish.

* Cure time may vary according to the ambient conditions and mass of resin extruded.

Repair Guide

TYPES OF REPAIR AND APPLICATION GUIDE

iQuip® Timbabuild® is used to either build up and mould to shape, to fill gaps and voids, or for splicing in new wood sections. These specific work instructions are described later. Below is a general guide to applying Timbabuild to any repair.

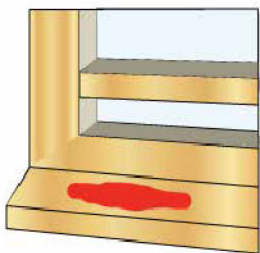


For a standard repair **iQuip® Timbabuild® EHB60** or **ERC10** may be used. However ERC10 should only be used on flat surfaces and where the repair is no greater than 10mm in depth. In fact, it is preferable to use ERC10 on this type of repair.

For deeper repairs, or repairs in vertical & overhead positions, EHB60 should be used.

Specification methods for repairing timber using Timbabuild®.

Repair of decayed timber, cracks and splits, imperfections, resin only.



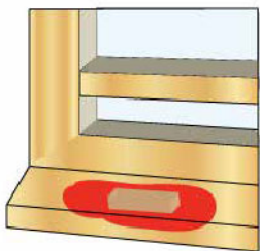
Remove paint from at least 10mm around the area to be treated.

Test for areas of soft and decayed wood by attempting to pierce the wood surface using a suitable sharp pointed tool, feeling for resistance. Clearly mark the repair areas.

Thoroughly remove all of the decayed timber, back to good wood.

Sand in the areas to be repaired to remove all loose fibres.

Prepare and apply EWS and EHB60 / ERC10 as appropriate, as per normal.



Repair Guide

TYPES OF REPAIR AND APPLICATION GUIDE

iQuip® Timbabuild® is used to either build up and mould to shape, to fill gaps and voids, or for splicing in new wood sections. These specific work instructions are described later.

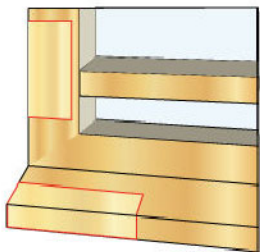
Below is a general guide to applying Timbabuild to any repair.



For a splicing repair, **iQuip® Timbabuild® ERC10** is most suitable for splicing, as it may be used as low as 1mm thickness, and creates a bond which is stronger than the wood grain itself. Its lower viscosity also means it is easier to 'butter' onto the surface areas prior to installation. Excess resin is easily cut with a knife or sanded down after curing. Finally, due to its fast curing action, **ERC10** may be used in same day repairs and will not create delays in time sensitive jobs.

Splicing in sections of new timber.

Splicing in of new timber may be desirable due to decay or vandalism. We recommend the use of Timbabuild® ERC10 to enable the repair to be carried out and finished as quickly as possible. When using Timbabuild® ERC10 as a filler, particularly on vertical surfaces, it is sometimes necessary to use Perspex shuttering in order to prevent slumping.



Remove all damaged timber from the repair area. Sand in the area to remove loose fibres.

Following normal procedures up to application of EWS, prepare the splice section. (This does not have to be exact size or shape - should be at least 4mm smaller).

Mix the amount of ERC10 and apply a bead of resin over the entire repair area at minimum 1mm deep.

Force the splice into place and ensure that all voids are filled. Remove excess resin.

When using ERC10 fix perspex shuttering in place if required.

Repair Guide

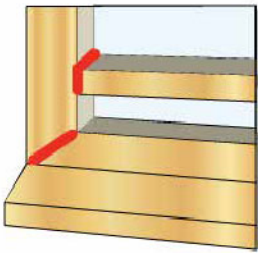
TYPES OF REPAIR AND APPLICATION GUIDE

iQuip® Timbabuild® is used to either build up and mould to shape, to fill gaps and voids, or for splicing in new wood sections. These specific work instructions are described later. Below is a general guide to applying Timbabuild to a conservation joint.



1. Conservation Joints.

It is recommended that all joints on the bottom rails of windows be treated by this method when carrying out pre-paint repairs, whether or not there is any visible rot at the time. These joints are known to be most liable to failure, and preventative action at this stage will remove the need for more costly repairs later.



Open the joint to a minimum width of 5mm and minimum depth of 10mm using a router.

Remove the existing paint from around the joint.

Thoroughly sand inside the joint to remove any loose fibres. Following normal procedures up to application of EWS

Mix the required quantity of Timbabuild® EHB60 and apply to the joint taking care to work it well in, in order to fill any voids.

When using ERC10 fix perspex shuttering in place if required.

Repair Guide

TYPES OF REPAIR AND APPLICATION GUIDE

iQuip® Timbabuild® ERC10 & EHB60 is used to either build up and mould to shape, to fill gaps and voids, or for splicing in new wood sections. These specific work instructions are described later.



1. Sill replacement

Before starting work ensure that you have the correct timber profile available for the replacement sill.



Completely remove the rotten sill. Remove any rotten timber at the back of the sill, mechanically.

Following normal procedures up to application of EWS, prepare the new sill section. Apply EWS to the contact areas of the new sill section.

Mix the amount of ERC10 and apply a bead of resin over the entire repair area and a bead over the replacement sill.

Work the sill into place taking care to ensure all voids are filled.

Countersink any fixings and apply ERC10 to the fixing holes.

Allow 1 hour to cure, and finish*.

*Please note gel and cure times are affected greatly by mass of product and temperature please refer to the indicative curing times in this guide.

Repair Guide

TYPES OF REPAIR AND APPLICATION GUIDE

The iQuip® Timbabuild® System is used to either build up and mould to shape, to fill gaps and voids, or for splicing in new wood sections. These specific work instructions are described later.



Sealing of end grain and unprotected sides

After the normal rot removal and preparation, EHB60 can be liberally applied to vertical surfaces, filling voids and cracks, then finished using an application knife with smooth edges

Repairing and applying new weatherboards

Where the existing weatherboard is in a good sound condition, open the joint between the weatherboard and the door using a mechanical router to a minimum width of 4mm and a minimum depth of 10mm. Apply Timbabuild® liberally to the back of the new weatherboard, then locate on door, taking care to ensure that there is no visible gap between the new weatherboard and the door. It is worth noting that cured Timbabuild® can be screwed, drilled and planed once cured if required.

Building up complex shapes

Timbabuild® can be used to build up seemingly complex shapes, with the use of a low density polyethylene bag (such as a thin food/freezer bag), and moulded by hand (using the appropriate hand protection) the plastic film can be carefully peeled away after curing.

Colouring the resin

iQuip Timbabuild® may be coloured to great effect, by using a small drop of oil-based colourant or oxide powder during the mixing process.



Guarantee

THE 50-YEAR INSURANCE BACKED GUARANTEE

The iQuip® Timbabuild® pledge a 50-year guarantee to approved trained contractors, to provide peace of mind on repairs carried out using our epoxy resin system.



Our 50-Year Pledge on the TIMBABUILD® System

A long standing history in the chemical repair industry.

Uniting the histories of Timbabuild® and Chemfix creates a powerful force in any industry. This enduring brand and system owe their strength to the loyalty of our customers. Timbabuild® not only delivers a superior product but also places a strong emphasis on providing excellent service. By actively listening to and addressing the needs of our customers, Timbabuild® combines this valuable insight with the expertise required for a leading manufacturer, ensuring the delivery of a cutting-edge chemical repair system in the market

The 50 year guarantee.

The 50 year guarantee applies to any type of Timbabuild® resin repair carried out by a Timbabuild® trained contractor following the product guidelines as laid out by the repair guide. This includes correct preparation, process and finishing guidelines. Official 50 year guarantee certificates may be applied for against specific projects by contacting your local distributor.

Don't take our word for it....

TIMBABUILD PROJECTS



for 100's more project images visit

www.iquip.com.au/timbabuild-projects



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