# 601 602 Marine Repair Kit A & C.

Resimac Marine A & C kits are epoxy resin and glass fibre based repair kits designed to repair a wide range of surfaces and equipment on board vessels.
The versatile resin system can be applied to any metallic or GRP/ glass fibre surface and is commonly used to seal leaking pipes, tanks seams, pumps & valves.
The system requires minimal surface preparation and is solvent free, therefore making it suitable for confined space applications.

## Kit Contents

| *Product* | *Description* | *Unit Size* | *A Kit* | *C kit* |
|---|---|---|---|---|
| 301 Epoxy Resin & Hardener | Surface tolerant solvent free epoxy gel for use with a range of technical fabrics | 300gm | 20 | 5 |
| 302 Epoxy Cement | Surface tolerant solvent free epoxy repair paste ideal for filling badly corroded metallic surfaces | 1kg | 1 | 1 |
| 103 Metal Repair Stick | Fast curing solvent free epoxy repair putty | 125gm | 2 | 1 |
| 105 Aqua Stick | Epoxy putty designed for repairing underwater metallic surfaces | 125gm | 1 | 1 |
| 110 Rubber Tourniquet | Rubber strap designed to be used with 103 Metal Repair Stick to seal live leaks on pipes | 30mm x 1.5mtr | 1 | 0 |
| 701 Glass Tape | Tightly woven glass fabric for use with 301 Epoxy Resin & Hardener and pipe wrapping repairs | 50mmx 50mtr | 2 | 1 |
| 705 Glass Cloth | Tightly woven glass fabric used with 301 Epoxy Resin & Hardener for steel plate repairs | 1m² | 3 | 1 |
| 706 Glass Mat | Glass fibre chop strand matting used with 301 Epoxy Resin & Hardener as a backing to repairs with glass tape or glass cloth | 0.5m² | 2 | 1 |
| 810 Linen Scrim | Open weave linen fabric which is used as a backing fabric to repairs with glass mat | 0.5m² | 3 | 1 |
| 615 Cellophane | Thin plastic sheeting that can be used to cover wet resin repairs while they cure. Cellophane will ensure the resin repair cures to a smooth hard finish | 0.625m² | 2 | 1 |
| 618 Contour Sheet | High strength plastic sheeting which can be used to cover large holes in pipes prior to wrapping with 301 Epoxy Resin & Hardener and glass tape | 0.125m² | 1 | 1 |
| 707 Fairing Compound | Strands of chopped glass fibre that can be added to mixed 301 Epoxy Resin & Hardener and used for repairs to GRP surfaces | 50gm | 1 | 1 |
| 708 Sealer Filler | Milled glass fibre that can be added to 301 Epoxy Resin & Hardener to create a viscous filler for GRP and metallic surfaces | 50gm | 2 | 1 |
| 612 Stirring Tool | | 25mm x 220mm | 10 | 2 |
| 613 Trowelling Tool | | 38mm x 150mm | 1 | 1 |
| 614 Vinyl gloves | | | 20 | 10 |
| 616 Scissors | | | 1 | 1 |
| 617 Masking Tape | | 12mm x 50mtr | 1 | 1 |
| 709 Resin Removing Cream | | 250gm | 1 | 1 |
| 902 Spatulas | | 50mm x 280mm | 10 | 5 |
| 906 Brush | | 2” | 2 | 1 |

## RESIMETAL 103 Metal Repair Stick – fast curing solvent free epoxy putty

**Resimetal 103 Metal Repair Stick** is a two component repair material in stick form which cures rapidly at room temperature after mixing. It is a metal repair adhesive which develops high mechanical strength in a short period of time.

**Typical Applications**

| | | |
|---|---|---|
| cracked pump or valve casings | scored hydraulic rams | worn bearing housings |
| damaged flanges | leaking tank seams | cracked engine blocks |

**Mixing and Application**

***Prior to mixing please ensure the following***:
The ambient & surface temperature is above 5°C (41F°).
The product is supplied in stick form and therefore the base and activator component are premeasured.
Simply break off the required amount of material from the stick and using gloved hands knead the product until the black and grey components become a consistent mid grey.
The product once fully mixed has a usable life of 3-5mins at 20°C (68F°).
Once a consistent mix has been achieved apply the material by pressing the putty onto the prepared surface.

**Cure Times**

At 20°C (68F°) the applied materials should be allowed to harden for the times indicated below

| | |
|---|---|
| Usable Life | 5 mins |
| Machining and light loading | 30 mins |
| Full cure | 1 hour |

**Over-coating times**

Minimum - the applied material can be over-coated as soon as it is touch dry.
Maximum - the over-coating time should not exceed 1 hours.



## RESIMETAL 105 Aqua Stick – fast curing solvent free epoxy for underwater repairs

**Resimetal 105 Aqua Stick** is a two component repair material in stick form which cures underwater after mixing. It is a metal repair adhesive which develops high mechanical strength in a short period of time.

**Typical Applications** Suitable for repairs to concrete and metallic surfaces underwater.

**Mixing and Application**

Prior to mixing please ensure the following:
The ambient & surface temperature is above 5°C (41F°).
The product is supplied in stick form and therefore the base and activator component are premeasured.
Simply break off the required amount of material from the stick and using gloved hands knead the product until the green and cream components become a consistent pale green colour.
The product once fully mixed has a usable life of 15mins at 20°C (68F°).

**Cure Times**

At 20°C (68F°) the applied materials should be allowed to harden for the times indicated below

| | |
|---|---|
| Usable Life | 15 mins |
| Hard dry | 45 mins |
| Full cure | 90 mins |

**Over-coating times**

Minimum - the applied material can be over-coated as soon as it is touch dry.
Maximum - the over-coating time should not exceed 90 mins.

## RESIMETAL 302 Epoxy Repair Cement – surface tolerant solvent free epoxy repair paste

**Resimetal 302 Epoxy Repair Cement** is a high performance, two pack, solvent-free epoxy repair system for use on metallic surfaces. Resimetal 302 Epoxy Repair Cement is ideal for applications where only minimal surface preparation can be carried out.

**Typical Applications** Suitable for rebuilding corrosion pitting on metallic structures such as internal/ external tank surfaces, pipes and pipework.

**Surface Preparation**

All surfaces must be cleaned with solvent prior to any surface preparation work
**Metallic Substrates – Hand tools**
All surfaces must be cleaned using wire brush, metal file, coarse sandpaper etc.
Once abraded, the surface must be cleaned with solvent to ensure as much oil and grease is removed.
**Metallic Substrates – Mechanical tools**
All surfaces must be mechanically abraded using handheld grinders to ***ISO 8501/4 ST2 (SSPC SP3 ST2)***.
Once abraded, the surface must be cleaned with solvent.

**Mixing**

***Prior to mixing please ensure the following***:
The base component is at a temperature between 15-25°C (60-77F°).
The ambient & surface temperature is above 5°C (41F°).
***Once these 2 checks have been met, please proceed with mixing the product***.
Using the spatula provided place 1 equal measure of base and activator on to a clean mixing surface
Mix the 2 components together until you have a streak free mix on the mixing board.
Ensure there is no unmixed material on the spatula or mixing board.

**Application**

Using a spatula or applicator tool, apply the material to the prepared surface.
Ensure the product is pressed into any holes, scars or cracks.
Once the repair has been completed smooth off any imperfections using a gloved hand.

**Coverage Rates**

1kg (2.2lb) of fully mixed product will give the following coverage rates –
0.208m² at 3mm 2.2ft² at 1/8"
***coverage rates quoted are theoretical and does not take into consideration the condition of the surface.**

**Cure Times**

At 20°C (68F°) the applied materials should be allowed to harden for the times indicated below

| | |
|---|---|
| Usable life | 30 minutes |
| Touch dry | 6 hours |
| Hard dry | 12 hours |
| Full cure | 2 days |

**Over-coating times**

Minimum - the applied material can be over-coated as soon as it is touch dry.





## 301 Epoxy Resin & Hardener – solvent free epoxy injection and pipe wrapping

**Resimetal 301 Epoxy Resin & Hardener** is a two component solvent free epoxy gel used for injection applications, bonding of dissimilar materials and for use in conjunction with a range of tapes and fabrics to produce high strength composite repairs.

**Typical Applications** Injection applications | Gap filling | Bonding dissimilar materials | Pipe wrapping

**Mixing**

***Prior to mixing please ensure the following:***
The base component is at a temperature between 15-25°C (60-77F°).
The ambient & surface temperature is above 5°C (41F°).
***Once these 2 checks have been met, please proceed with mixing the product.***
Transfer the contents of the Activator unit into the Base container.
Using the spatula provided (300-450gm units) mix the 2 components until a uniform material free of any streaks is achieved.
From the commencement of mixing tthe material should be used within 25 minutes at 20°C (68°F).

**Application**

**Injection Applications** - dispense the product into a one component cartridge up to 1ltr volume (0.25 US gallon). Using a single component injection pump, air fed, the material can be injected into gaps to bond dissimilar materials.
**Bonding dissimilar materials –** the mixed material can be used to bond a wide range of material including, concrete, plastic and metal. Apply the product using a brush or applicator tool at a wet film thickness range of 1mm – 4mm (40mil – 3/16").
**Encapsulation using technical fabrics –** the mixed product can be used in conjunction with glass tape, glass cloth, chop strand matting and linen scrim.

**Coverage Rates**

300gm (0.66lb) of fully mixed product will give the following coverage rates –

| | |
|---|---|
| 0.50m² at 500 microns | 5.3ft² at 20mil |
| 0.25m² at 1mm | 2.7ft² at 40mil |

****the coverage rates quoted are theoretical and do not take into consideration the surface condition***

**Cure Times**

At 20°C (68F°) the applied materials should be allowed to harden for the times indicated below

| | |
|---|---|
| Usable life | 25 minutes |
| Touch dry | 2 hours |
| Hard dry | 24 hours |
| Full cure | 3 days |

**Over-coating times**

Minimum - the applied material can be over-coated as soon as it is touch dry.
Maximum - the over-coating time should not exceed 8 hours.





## RESIMETAL 110 Rubber Tourniquet – Emergency leak stopping rubber tape for pipes up to 125mm (5") diameter

**Resimetal 110 Rubber Tourniquet** is a high performance repair bandage, specifically developed for the repair of "live" leaking pipes. Apply to hand prepared or mechanically cleaned surfaces. Suitable for low pressure "live" water leaks up to 5 Bar (72.5 psi) pressure leak sealing.

**Application**

Prior to mixing please ensure the following:
The ambient & surface temperature is above 5°C (41F°).
Once this check has been carried out, please proceed with applying the product.
Mix a small quantity of Resimetal 103 Repair Stick.
The quantity should be enough to cover the leak area and the surrounding pipe wall by a minimum of 25mm at approx. at a nominal 10mm thickness.
Apply the ball of material directly above the live leak, without covering the leaking section of pipe.
Centre tape to 1 side of the leaking surface and wrap the bandage around the pipe, pulling firmly.
After the 1st wrap, the tape should be anchored, for the 2nd wrap, cover the 103 material with the tourniquet and using pressure force the material into the leak area. Continue wrapping.
Each wrap should overlap the previous wrap by approximately 50%
The wrapping should extend a minimum of 75mm on each side of the repair.
Wrap the entire length of rubber and attach with the Velcro fastener.
Leave the 103 Metal Repair Stick to cure for an hour before unwrapping the 110 Rubber Tourniquet






## 707 Fairing Compound

**707 Fairing Compound** is a blend of 5mm wide glass fibre strands ranging from 50mm to 75mm in length. 707 Fairing Compound can be added to mixed 301 Epoxy Resin & Hardener to create a thixotropic paste ideal for repairs to GRP surfaces. Once cured the resin system can be easily sanded down to a smooth finish.





## 708 Sealer Filler

**708 Sealer Filler** is milled glass fibres that have been designed to be added to mixed 301 Epoxy Resin & Hardener. This blend of 301 Resin & Hardener and milled glass fibres creates a thixotropic paste ideal for filling cracks, holes or corrosion pitting on metallic surfaces.




## 3 Wrap Pipe Repair—Mechanical Surface Preparation—300psi pressure resistance

Using the 301 Epoxy Resin & Hardener and 50mm wide glass tape you can seal and encapsulate leaking pipework.

**Surface preparation** must be performed using handheld mechanical grinders and achieve a minimum of ST3 surface cleanliness
**Cleaning and Degreasing** must be performed using a suitable solvent or bio cleaner to remove any surface contaminants
**Mix and Apply** 301 Epoxy Resin & Hardener to the repair surface at a WFT of 1mm
**Wrap** the 50mm wide glass tape around the pipe ensuring there is a 50% overlap
**Repeat** this process twice more so you have 3 wraps of glass tape & 301 Resin on the pipe

**Complete** the repair by applying a final layer of 301 Epoxy Resin and Hardener to the repair surface
**Cellophane** can then wrapped around the pipe to hold the resin in place and ensure it does not drip onto any other surfaces

## MultiWrap Repair—Mechanical Surface Preparation—450psi + pressure resistance

Using the 301 Epoxy Resin & Hardener and 50mm wide glass tape you can seal and encapsulate leaking pipework.

**Surface preparation** must be performed using handheld mechanical grinders and achieve a minimum of ST3 surface cleanliness
**Cleaning and Degreasing** must be performed using a suitable solvent or bio cleaner to remove any surface contaminants
**Mix and Apply** 301 Epoxy Resin & Hardener to the repair surface at a WFT of 1mm
**Wrap** the 50mm wide glass tape around the pipe ensuring there is a 50% overlap
**Repeat** this process twice more so you have 3 wraps of glass tape & 301 Resin on the pipe

To create a higher pressure resistant repair you must now use the other technical fabrics contained in the kit.

**Glass Cloth** should be cut to fit around the entire pipe repair surface,
**Mix and Apply** 301 Epoxy Resin & Hardener to the repair surface at a WFT of 1mm
**Wrap** the Glass Cloth around the pipe and ensure the 301 Resin & Hardener has saturated the surface of the glass coth
**Glass Mat** Should then cut to the same size as the glass cloth
**Mix and Apply** 301 Epoxy Resin and Hardener on to the Glass mat and then wrap this around the pipe repair surface
**Ensure** the resin has saturated all of the glass fibre matting

If required, and as a final safety measure you can use the linen scrim fabric contained in the kit. Cut the linen fabric to the same size as the glass cloth and glass mat. Lay the fabric on a clean plastic surface. Mix and apply 301 Epoxy Resin & Hardener to the linen fabric so it is fully saturated with resin. Wrap the saturated linen fabric around the pipe repair surface.
Once you have completed your repair wrap a sheet of cellophane around the repair surface to hold the resin in place. Leave to cure.
Once the resin has cured hard the cellophane can peeled off the surface.

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