

# BoatCraft Pacific

## AQUACOTE WATER BASED EPOXY UNDERCOAT AND WATER BASED POLYURETHANE TOPCOAT COATING

### SPECIFICATION & PROCEDURE

#### SURFACE PREPARATION

Surfaces must be clean and free of all traces of oil or grease. It is a possible limitation of water based coatings that they have no solvent cleansing action during application, therefore surface preparation must be more stringent. Follow these steps:

1. If there is any possibility of grease or wax on the surface, such as on fibreglass, scrub the surface with copious amounts of strong degreasing detergent & rinse thoroughly. Do not simply wipe the surface with a solvent wetted cloth, that will only spread contamination more generally.
2. Sand the surface to a uniform finish with 120 grit abrasive paper.
3. Immediately before applying the coating, remove dust from the surface by wiping with a clean lint free towel dampened *with water only*. **Do not wipe with solvent**. Wiping with solvent is more likely to spread contamination from hands and cloth onto the job, rather than the other way around. Keep your hands and fingers **off** the surface, use your eyes to see how clean it is, not dirty fingers.

#### UNDERCOAT APPLICATION

Aquacote High Build Undercoat is primarily to be used in relevant applications as a high build easy sanding primer.

1. Mix the contents of both parts A and B of the Aquacote Undercoat. Measure out equal volumes of each into a container and mix thoroughly, scraping unmixed material off the sides during the mixing process. Do not mix more material than can be used within 30 - 45 minutes. Re-mix frequently during application.
2. Aquacote Undercoat may be thinned with up to 15% water. This prolongs the pot life but does not alter surface cure time.
3. Undercoat should be built up to a rather thick coating, at a coverage of about 3-5 sq m per litre, using brush, roller, or spray. It can be sprayed easily using a high build primer gun with a 2 - 3 mm tip, or can be thinned with water for conventional guns. Apply a first mist coat and allow it to tack before applying a full coat. A second coat can be applied for further build after 1 - 2 hours or when the first coat has become tacky. Apply several thinner coats rather than one thick one to prevent runs and sags.
4. Allow a full 24 hours at temperatures above 20 deg C for the Aquacote Undercoat to cure fully to a hard sanding finish. Low temperatures, moisture or high humidity will retard the cure rate. Always sand the surface between applications if the coating has become fully cured.

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## TOPCOAT APPLICATION

When applying over Aquacote Undercoat, after the undercoat is cured hard it can be sanded to a fine finish ready to receive the topcoat.

1. Sand the undercoat to an even surface with coarse abrasive using e.g. 80 grit in an orbital sander. Then work down through increasingly finer abrasive grades to remove scratches and obtain a very fine smooth surface. For many applications, 180 grit paper will be fine enough, but for the most fastidious finishes 240 or even finer paper should be used. Examine the surface against the light for uniformity, and to see if any residual scratches can be seen. There is no substitute for careful preparation to achieve a perfect finish. Remove dust from the surface again by wiping with a clean cloth dampened with water only.
2. Mix Cross Linker into Aquacote Polyurethane topcoat at a rate of 1.5%, or 15 ml per litre. The pot life of the catalysed liquid is 4 - 6 hours. After that time the cross linker will have become de-activated, and the mix will require a further addition of cross linker. This means that any unused mixture may be returned to the original can for future reuse. Aquacote Polyurethane will not cure to a strong well adhered coating if it is not cross-linked. Strain the coating through a fine mesh to remove any solid particles which may have formed from dried coating accidentally returned to the can.
3. Aquacote Polyurethane may be applied by foam brush, roller, or spray. Spray or a foam brush are the preferred application methods. If spraying, use a conventional gun with a fine tip for most uniform application. A foam brush is far preferable to a bristle brush for giving a very smooth coating. Apply a full coat at a wet film thickness of 200 microns, to give a dry film of about 40 microns per coat, at a coverage rate of 10 sq m per litre.
4. Aquacote Polyurethane should flow out and level as it dries and may need thinning with up to 15% water. Water thinned coats flow out better than unthinned coats in warm or dry atmospheres. You may need to experiment with the consistency of the paint for the best application under your particular ambient conditions.

NOTE ! NEVER ADD ANY SOLVENTS TO AQUACOTE PAINTS - they may coagulate.

5. Do not apply Aquacote Polyurethane under hot dry conditions, or under cold wet conditions. The former will make it dry too quickly and it may not have time to level properly. The latter conditions may entirely prevent it drying in any reasonable period. In warm conditions thin with up to 15% water to slow the drying. Preferably apply Aquacote during a cool time of the day, such as early morning, when some dampness will aid application, but drying will proceed easily as the temperature rises later.
6. At least two coats will be required to ensure even application. A third coat enhances the gloss level, particularly with clear coatings. Subsequent coats may be applied up to 4 hours after the previous one has dried. If longer time has elapsed, or if a very smooth finish is desired, sand the surface between coats with very fine paper, 240 grit or finer.

Aquacote coatings harden gradually over several days. Allow at least 4 days prior to placing the finished job into full service. Be warned! This coating is very hard to sand after it is fully cured.

## CLEAN UP

Brushes and equipment may be washed out in water. Always leave them to soak overnight in clean water to remove coating residues. Partly dried and cured residues may dissolve in acetone or similar solvent but will become increasingly difficult to remove as cure progresses.

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## USE WITH OTHER PAINTS

We do not recommend use of Aquacote over single pack alkyd type paints. It is possible that Aquacote coatings can be applied over other two pack paints, or other paints applied over Aquacote. Unfortunately we cannot test all paints available, and other paint manufacturers may produce new formulations without reference to us. Therefore we are unable to provide any specific recommendations regarding compatibility with other paints. Users are invited to obtain sample quantities to evaluate their own particular circumstances.

## SAFETY AND HANDLING

While these products are considerably safer to use than solvent based paints, suitable handling precautions must always be observed. Always work in a well ventilated area. Do not smoke, eat or drink, while using these products. Avoid skin and eye contact.

1. Epoxy chemicals and the polyurethane cross linker may have a sensitising effect on some individuals. Therefore always wear skin and eye protection when mixing and applying coatings. Wear disposable rubber gloves, a long sleeved shirt, and safety glasses. Remove any spilt material with soap and water.
2. For all spraying operations a quality respirator is necessary to protect the user from the aerosol overspray, as well as the small quantities of cosolvent in the paint.
3. Only sand the coatings after they are well cured. Wear a dust mask, and wear protective clothing to protect the skin from dust.
4. If a rash or irritation occurs, discontinue use of these products and apply a skin cream to the affected areas.

## TYPICAL PROPERTIES – Aquacote Polyurethane

### Coating Properties

Type	Aliphatic polyurethane emulsion	Total solids	35 - 40 w/w%
Appearance	Semi-translucent or pigmented	Specific Gravity	1.05
Viscosity	300 – 350 mPa.s	pH	7 – 9
Flash Point	>100 deg C	Freeze/thaw stability	Stable
Miscibility	100% with water, do not mix with solvents		

### Film Properties

Drying time	20 minutes	Full cure time	3 – 4 days
Film tensile strength	50 Mpa	Film Elongation	>100 %
Hardness - Pencil	3H	Impact resistance	high
Sward	55 – 60	Adhesion	830 N/m
Taber abrasion CS17	50 – 55 mg per 1000 cycles	VOC	174 gm/L

## WARRANTY

BoatCraft Pacific Pty. Ltd. warrant that all products complied with the company's manufacturing standards at the time of shipment. All statements, technical information and recommendations are based on tests we believe to be reliable; they are given in good faith, but without assuming any obligation or liability. As we have no control over the conditions under which our products are being used or their method of application, no warranty, expressed or implied, is made as to the effect of such use or the results obtained, and neither seller nor manufacturer shall be liable for any injury direct or consequential arising out of the use of or inability to use our products.