



WATERBLOK ACRYLIC WPC

GENERAL SPECIFICATIONS

1. COMPANY CONTACTS

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2. MANUFACTURER

Dalven Products cc, P.O Box 371, Eppindust 7475, Cape Town, South Africa

3. MATERIAL DESCRIPTION

- 3.1. **General Description:** A dense, brushable, water based, thixotropic, pigmented 100% acrylic emulsion waterproofing compound used in conjunction with geotextile fabric.
- 3.2. Waterblok Acrylic WPC (AWPC) is a brushable 100% acrylic coating material used to create high quality, long lasting waterproofing systems which when used on its own or in conjunction with a reinforcing geotextile fabric, produces a highly elastic film which is impervious to water. It also protects against the effect of ultra-violet rays. It has the following characteristics and advantages:
 - 3.2.1. High resistance to degradation by ultra-violet rays
 - 3.2.2. Water based
 - 3.2.3. Flexible under all ambient temperatures
 - 3.2.4. Excellent hiding power
 - 3.2.5. Thixotropic - resists flow on vertical surfaces
 - 3.2.6. Resists fungus and mould growth
 - 3.2.7. Non-sag
 - 3.2.8. Does not fade or lose color
 - 3.2.9. Brush or roller cold applied
 - 3.2.10. Excellent adhesion to surface irrespective of whether concrete, masonry, metal, etc.
 - 3.2.11. No solvent or strong smell
 - 3.2.12. Environmentally friendly
 - 3.2.13. Easy to apply and no special skills or equipment is required
- 3.3. Typical uses are on exterior walls, firewalls, damp walls, parapets, as a flashing, galvanized & similar types of roofing, roof decks (where a sufficient slope to drain exists with no

ponding of water), canopies (with sufficient slope to drain), flashing, as a decorative and protective coating, etc.

4. PRODUCT DELIVERY, STORAGE and HANDLING

4.1. DELIVERY:

4.1.1. Materials shall be delivered in original sealed containers as shipped by the manufacturer.

4.2. STORAGE:

4.2.1. Store at temperatures between 5⁰C and 40⁰C. Do not store for long periods in direct sunlight.

4.2.2. AWPC can be stored for 18 to 30 months.

5. ACCEPTANCE OF MATERIALS

5.1. Only material supplied by or having been endorsed as being supplied by the sole distributor and importer Waterblok Systems should be accepted.

6. APPLICATORS

6.1. Submit proof of accreditation from Waterblok Systems or proof of enrolment in Waterblok Systems training program with accreditation to follow.

7. ADDITIONAL MATERIALS

7.1. Tissue Geotextile, a thermally point bonded 100% polypropylene fabric of a thickness of 0.15mm, in accordance with specifications from and approved by Waterblok Systems.

7.2. 105gsm non-woven needle punched polyester or polypropylene geotextile fabric (for flashings and joins) in accordance with specifications from and approved by Waterblok Systems.

8. CONCRETE SUBSTRATES

8.1. Curing periods for “green concrete” must be observed.

9. SURFACE PREPARATION

CONCRETE AND MASONRY SUBSTRATES

9.1. If the substrate is already painted, inspect the paint thoroughly. If the paint is not well bonded to the substrate, flaking, peeling, cracking, splitting and/or powdery it must be stripped and removed. If the paint is still well bonded to the substrate there is no need to remove it. However, areas where the paint is not well bonded to the substrate, flaking, peeling, cracking, splitting and/or powdery must be stripped and the edges smoothed by rubbing with fine sand paper.

- 9.2. Ensure that all cavities, exposed pipes, exposed Concrete Hollow Blocks (CHB) or other masonry with gaps in the substrate be filled and smoothly plastered to ensure proper installation and adhesion.
- 9.3. Chip off all plaster, irregularities and loose sections from the substrate. The substrate must be very smooth especially if a geotextile is to be embedded over the entire area (a slightly rippled substrate however poses no problem but the application rate of the AWPC must be increased to compensate). If any of this will come loose at a later stage the waterproofing will come loose with it and create a breach which could lead to leaks.
- 9.4. Check the substrate for structural and/or other defects such as “honeycombs”. Best method is through light chipping and pounding with a hammer. If such defects are found, it must be repaired.
- 9.5. Check the substrate for cracks. All cracks wider than 1mm should be filled with an acrylic putty, grout or water base structural epoxy.
- 9.6. Thoroughly clean the area to be waterproofed and ensure that all dirt, moss, dust and all other foreign matter are removed and the area is totally clean. It is sometimes a good idea to wash the area with water (no detergents added) after cleaning leaving the substrate moist prior to application of primer. If there is any dirt or dust on the substrate, the waterproofing will adhere to the dust or dirt and not penetrate the substrate to ensure proper adhesion. This could lead to waterproofing failure at a later stage.
- 9.7. Before applying the AWPC primer coat, the surface to be covered may be lightly dampened to break down surface tension effects. The first coat may be applied onto a damp surface but with no free water or permanent dampness present.

OTHER SURFACES

- 9.8. Consult Waterblok Systems.

10. MIXING

- 10.1. The pail of AWPC must be stirred well until totally smooth and all solids (if any) dissolved.

11. MIXING RATIOS

11.1. PRIMER

- 11.1.1. Consists of a 50/50 mix of AWPC and clean water.

11.2. SATURATION COAT (only for use in conjunction with a 105gsm geotextile)

- 11.2.1. Consists of a 70/30 mix of AWPC and clean water.

11.3. ALL OTHER COATS

- 11.3.1. Are applied totally undiluted

12. PRIMER COAT

- 12.1. On plaster, concrete or porous substrates - Brush onto surface at a rate of approximately 0.30 liter per square meter. Allow to dry for 2-4 hours.
- 12.2. On painted substrates - Brush onto surface at a rate of approximately 0.15 liter per square meter. Allow to dry for 2-4 hours.
- 12.3. On other smooth non-porous surfaces the application of a primer is optional and prevalent conditions will dictate whether the use of a primer coat is necessary or not. Consult Waterblok Systems in this regard.

13. DETAIL WORK

13.1. FLASHING

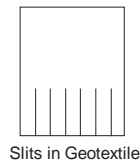
For AWPC applications flashings are normally installed bridging the joint between an existing metal flashing and the wall, bridging a gap between two existing adjacent exterior walls of different heights, the edge between the wall and a sloping roof, the joint between the wall and an awning, the joint between the wall and a metal, shingled or tiled roof, etc. The dimensions of the flashing will largely depend on the prevalent conditions and if movement is likely to occur some slack is allowed in the flashing itself. A typical flashing will extend 200mm each side of the edge or join. A 105gsm geotextile is used for flashings. The installation is as follows:

- 13.1.1. Cut the geotextile in strips (if desired flashing is 200mm each side of the edge or join the width of the strip shall be 400mm).
- 13.1.2. Prime the entire area where the flashing is to be installed. Application of the primer should extend at least 25mm wider on both sides as the width of the geotextile strip. Allow the primer to dry for 2 hours or longer period until totally dry.
- 13.1.3. Apply a thick coat of AWPC (extending the width of the primed area) 150mm to 200mm at a time and immediately embed the geotextile (**FURRY SIDE DOWN**) in the wet AWPC by pushing down hard with the hands and brushing hard with the hands to ensure that there are no creases. The AWPC should penetrate the top of the geotextile through this method. Special care should be taken that all geotextile edges are 100% embedded and that there are no loose areas
- 13.1.4. Repeat the above until the entire flashing is installed.
- 13.1.5. Where joins need to be made, allow an overlap of 50 to 75mm.
- 13.1.6. Special care should be taken in corners. The horizontal section of the geotextile may have to be cut and overlapped to ensure smooth embedding.
- 13.1.7. Apply a AWPC saturation coat over the entire area. Ensure that the entire geotextile section is saturated with this application and allow to dry for 6 to 8 hours.

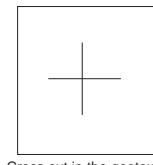
13.2. DRAINS AND PIPES

- 13.2.1. Prime a 500mm area around the drain or pipe with a AWPC and water mix.
- 13.2.2. Cut a section of geotextile sufficient to go around the pipe and overlap by 50mm. The length of the geotextile will normally be 150mm for vertical installation and 150mm for horizontal installation, i.e. a length of 300mm. Cut 150mm long slits

50mm apart in the length of the matting (Fig. 1). Cut another 300mm by 300mm geotextile section and make a cross cut in the middle to tightly fit the diameter of the pipe (Fig. 2).



Slits in Geotextile
Fig. 1



Cross cut in the geotextile
Fig. 2

- 13.2.3. Apply a thick coat of AWPC on the pipe (to a height of 150mm [dependant on the height of the concrete topping to be installed]) and wrap a section of geotextile (**FURRY SIDE DOWN (INSIDE)**) (Fig. 1) around the pipe allowing a 50mm overlap. Apply a thick coat of RWPC on the surface substrate and securely embed the strips of geotextile in it. Apply a saturation coat and allow to dry for 4 hours.
- 13.2.4. Apply a thick coat of AWPC in a 350mm square around the pipe, pull the section of geotextile with the cross cut (**FURRY SIDE DOWN**) (Fig. 2) over the pipe and firmly embed in the wet AWPC. Apply a thick coat of AWPC on the pipe to embed the geotextile triangles. Apply a saturation coat and allow to dry for 6 to 8 hours (preferably overnight).

13.3. **CRACKS IN CONCRETE SURFACE**

- 13.3.1. Embed 100mm width strips of geotextile extending 50mm longer than the crack on each side over the crack following the methodology outlined above.

13.4. **CONSTRUCTION AND OTHER JOINS**

- 13.4.1. If there are any construction or other joins a geotextile (0.5m each side of the join [total strip width 1 meter]) must be embedded in AWPC over the entire length of the join following the methodology outlined above.

14. **WATERPROOFING APPLICATION**

For the waterproofing application it is necessary to distinguish between the surfaces to which AWPC is to be applied.

14.1. **REINFORCED CONCRETE**

- 14.1.1. Brush-apply AWPC at a minimum rate of 0.45 liter/sqm over the entire area and allow to dry for 2 to 4 hours.
- 14.1.2. Roller-apply at a minimum rate of 0.15 liter/sqm per coat a final two coats of AWPC over the entire area allowing 2 to 3 hours drying between coats.
- 14.1.3. The overall application rate on reinforced concrete is 0.75 liter per square meter on vertical areas and 0.75 to 1 liter per square meter on sloping areas. If reinforcement is used, the application rate will increase correspondingly and will be similar to that of CHB walls.

14.2. CONCRETE HOLLOW BLOCKS (CHB) & SIMILAR TYPE WALLS

- 14.2.1. The first coat of AWPC is applied at a minimum rate of 0.45 liter/sqm (applied a maximum of 0.5 meter at a time ahead of the embedding) and whilst still wet, a “tissue” geotextile fabric is embedded in it by firmly pressing down and rubbing with the hands removing all and any creases. 50 to 100mm overlaps are allowed at geotextile joints.
- 14.2.2. Immediately brush-apply a further coat of AWPC at a minimum rate of 0.20 liter/sqm over the embedded area.
- 14.2.3. This process is repeated until the entire area is covered with a AWPC/geotextile application. It is allowed to dry for 3 to 4 hours.
- 14.2.4. Roller-apply a final three coats of AWPC at the rate of 0.15 liter/sqm per coat over the entire area allowing 2 to 3 hours drying between coats.
- 14.2.5. The overall application rate is 1 to 1.2 liters per square meter.

14.3. OTHER SURFACES

- 14.3.1. Contact Waterblok Systems for guidelines and application rates.

15. DESIRED COLOR FINISH

Any desired color finish can be attained using the AWPC system. If a specialist color needs to be attained a 100% acrylic paint can be used as last coat to attain that color after using an acrylicolor (tint) in the previous two coats to reach a color as close as possible to the final desired color. The methodology is as follows:

- 15.1. In the first roller applied coat (14.2.4 above) mix an acrylicolor (tint) at maximum 500ml per 20 liter AWPC to attain a color closer to the desired color finish.
- 15.2. In the second coat add acrylicolor (tint) at maximum of 1 liter per 20 liter AWPC to get color close to desired color finish.
- 15.3. In the final coat add acrylicolor (tint) at maximum of 1 liter per 20 liter AWPC to attain desired color finish. Alternatively, if custom color or difficult color is desired use a 100% acrylic paint of the desired color to attain the desired color finish.

16. FIELD QUALITY CONTROL – Water Tightness Testing (Optional)

- 16.1. Area can be watered down two days after completion of application to test for any leaks. However, in most cases it is not practical and the best test is the first heavy rains.

17. HINTS & TIPS

- 17.1. Wash tools with water immediately after working. Stubborn residue can be removed with acrylic thinners. However make sure that all traces of thinners are removed before the next use of the brush or roller.
- 17.2. If rain is imminent, stop working.

- 17.3. During application make sure that the applicator has a small pail of water to dip the brush or roller in from time to time to prevent clogging of the brush or roller.
- 17.4. When work stops clean the brushes and rollers in water and leave it in the water till used again. This will lengthen the lifespan of the brushes and rollers as well as ensure good application.
- 17.5. Where overlaps are indicated, allow 50mm.
- 17.6. Where joints occur, ensure that they are staggered in successive layers.

18. PROPERTIES AND DATA

- 18.1. Typical properties of AWPC:

Product type	Water based pigmented acrylic emulsion compound
Drying time	3 – 4 hours out of doors
Flash point	Non-flammable
Toxicity	None
Solids content	60% m/m minimum
Viscosity	110 – 120 Kreb units (soft paste)
Density	1.3 kg. Per liter
Artificial weathering	No defects after 2,000 hours in weatherometer
Sagging and dripping	None
Consistency	Thixotropic
Colors	Red, Green, Light Gray, Dark Gray, White & Black

19. APPLICATION RATE

- 19.1. The average total overall per square meter consumption of AWPC is 1 to 1.2 liters when applied to masonry surfaces. This consumption will depend on the number of coats, whether applied to a RC wall, CHB wall or other substrate, whether reinforcement geotextile is used or not and the specific requirements of individual types of application. Waterblok Systems should be consulted first to determine the correct application rate for any application at variance with the foregoing.

20. DETAILED GUIDELINES

- 20.1. The foregoing are the general specifications and guidelines for application of AWPC and, as far as application rate, surface preparation, detail work and application itself, hold true, with minor variances, for all types of application in general terms.
- 20.2. As ground conditions vary from application to application and project type to project type Application Guidelines can only be finalized once the specific ground conditions have been examined and the best application methodology and application rate are established.
- 20.3. Upon request specific General Application Guidelines will be furnished for different application types provided however that the final and detailed Guidelines (application rate, surface preparation & application methodology) will only be provided by Waterblok Systems once the specific project & ground conditions are fully known and, if deemed

necessary, the site inspected. This will mostly take place directly prior to application when the area is ready to receive the waterproofing application.

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