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## Rainwater Tanks

The solution to a high-water bill. Manufactured from BHP Aquaplate® Steel

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### Materials

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#### Aquaplate®

Has been specifically developed to provide reliable drinking water. Aquaplate is derived from the bonding of a food grade polymer film to the face of sheet steel. The polymer is manufactured to meet Australian Standard 2070 Plastic materials for food contact use. Regardless of the water source, water temperature should not exceed 65°.

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#### Aquaplate® Walls

Are galvanised steel base with polymer film bonded to one face which forms the wall of the tank. The polymer film is always located on the inside of the tank. The outside surface is treated with GALSEAL, a clear weatherable water-base laquer. The primary function of the laquer is to minimise early dulling of the outside finish but it is also an excellent primer for the application of paint finish such as Dulux Weathershield or an equivalent oil-based alkyd such as Dulux Hi-Gloss.

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#### Aquaplate® Bottom

Is a galvanised steel base with polymer film bonded to both sides for tank bases. Tank water for drinking is generally collected from a roof catchment. The type of roof surfaces does not effect Aquaplate tank life whether it be galvanised roofing, cement tiles or inert catchment such as terracotta tiles or Colorbond steel decking. River, bore and town waters do not cause the problems associated with galvanised or Zinalume tanks.

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### Manufacture of Aquaplate Tanks

Great care is taken during the curving and assembly process to avoid damage to the polymer membrane. Damage to the film must be repaired to maintain an unbroken barrier to the water. There are two basic methods of sealing Aquaplate® Tanks.

1. Post Sealing
2. Sandwiching

Note : Soldering is not practicle due to the polymer film, removal of which will void any warranty claim. Metroll choose to use a combination of both methods. Sealant is placed between the lap joints prior to fastening. When the joints are fastened together the sealant is

squeezed through the joint totally filling all gaps. All the lap edges and fasteners inside the tank are sealed and tanks left to stand allowing the sealant to cure.

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## Fastening

Metroll uses a unique 'self piercing riveting system' utilising the most advanced technology available. A joint is made between two materials by using a rivet to pierce and clinch in a single operation. This jointing method does not damage pre-coated materials, offers very high strength with consistent quality and the possibility of failure due to pull through is greatly reduced.

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## Tank Tops

A tank top normally made from galvanised steel must be fitted to shield the inside of the tank from light which could encourage the growth of algae. A further reason is that the food grade polymer lining is not UV resistant.

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## Aquaplate® Steel for Drinking Water Tanks

BHP Coated Steel - Australia warrants that Colorbond Aquaplate® steel or Aquaplate® Z450 steel to perform for up to 20 years from date of installation. In the case of water tank bases, BHP further warrants that double-sized Aquaplate® Z275 steel will have a minimum life prior to perforation of 20 years from date of installation.

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## Handling and Maintenance of Water Tanks Made From Aquaplate® Steel - Important Considerations

- First fill, as all water tanks it is essential that the first fill be drained from the tank. This is advisable for health reasons. The roof or gutter could have toxic matter on or in it. The tank itself could have residual contaminants within it as a result of its manufacture or transportation.
- If the roof is painted, always check the paint's suitability for collection of drinking water.
- Do not collect drinking water from lead, copper and copper treated timber.
- LOCATION OF TANK : Ideally the tank should be installed in a shady location away from trees which leaves and debris could clog the strainer or contaminate of the tank.
- TANK BASE : Tanks made from Aquaplate® steel must be installed on a firm, flat, stable platform the dimensionsof which must be larger than the diameter of the tank.
- All tanks made from Aquaplate® steel are supplied with a protective membrane under the base, they may be placed directly onto a concrete pad.  
Tank stands must be engineered to safely support the tank when fill of water bearing in mind that water weighs 1 kilogram per litre or approximately 10 pounds per gallon.
- Copper pipes must not be connected to tanks. If copper outlet pipes are involved, there must be at least two metres of plastic pipe between the tank and the copper piping. Copper must not be involved for recirculating water into a tank manufactured from Aquaplate® steel.
- Ensure that water from the overflow outlet doesn't fall onto the outside of the tank. Ideally the overflow outlet should be continued to the ground.
- Kerosene is often used to provide a film on the water surface as an anti-mosquito measure. THIS is not recommended for health reasons, and in addition, it may cause damage to the lining.
- ODOUR AND TASTE: Experience has shown that a slight odour or taste associated with

the water from an Aquaplate tank is flushed out. In the event that either problem persists the catchment area should be checked for contaminants such as dead birds, animals or even lichen on tiles which has been known to cause unpleasantness.

- ACCESSORIES : Modern accessories for water tanks must be designed to give long life to match that of any part of any Aquaplate tank. Alternatively a PVC overflow with appropriately contoured flanges or a stormwater pipe adaptor can be fitted. A gauze filter should be fitted to exclude mosquitoes.
- INLET STRAINERS : Anodised aluminium or PVC Mesh should be used, never copper or copper alloys. However most areas accept a coarser filter. Zincolume® steel is a suitable material but must be located above the water level.
- OUTLET FITTINGS: Copper and its alloys MUST NOT be used for fittings connected to an Aquaplate water tank. If copper pipe is used for water reticulation at least two metres of plastic pipe must be installed between the copper pipe and the tank. If water servicing a home through copper pipe turns blue or green the cause is the copper dissolved from copper or copper alloy fittings not from the Aquaplate® liner. This is called 'cupro-solvency' and can occur when water acidic in nature comes into contact with copper metal. Water in this condition must not be used for drinking until its suitability has been established.