



Engineered solutions  
for tiling, flooring and  
waterproofing projects

# ARDEX BUTYNOL<sup>®</sup>

Water Containment Membranes

# ARDEX Butynol<sup>®</sup>, proven over 40 years in water races, canals, tanks and reservoirs of New Zealand

## Years of Outstanding Performance

ARDEX Butynol<sup>®</sup> is a synthetic rubber membrane that resists the effects of heat, UV and ozone. Its unique double layer lamination provides a totally waterproof barrier for the containment of liquids and gasses.

## GROWING WITH NEW ZEALAND

ARDEX Butynol<sup>®</sup> flexible membrane follows curves, angles and irregular surfaces and provides the versatility needed to seal water races, storage ponds and reservoirs demanded by New Zealand's agricultural sector.

The 1960's was noted for large construction projects for hydropower, requiring canals, dams and waterways. These have given way to alternative sources of power generation and storage with a greater emphasis on water conservation.

## EXPERIENCE WHERE IT COUNTS

There are decades of experience available from a variety of ARDEX Butynol<sup>®</sup> projects for almost any transportation or storage purpose. At our manufacturing plant in Christchurch we measure and vulcanise all the sections together so that it arrives on site ready to install.

Over 5 million square metres have been installed throughout NZ, Australia and the Pacific Basin. Constant and continuing research including current on-going tests form part of the ever growing extension to uses, application and refinement of the product.

A unique and rather exclusive 20 year guarantee also exists where the product has been fixed by trained and experienced applicators accredited by the Company.

The technical nature of the Water Management field has high-lighted the necessity for specialised design, experienced engineering in preparation of sites, and controlled application of the membranes to maximise benefit to the owner. One such field is the rapidly expanding area of Waste Disposal and Waste Product recycling.

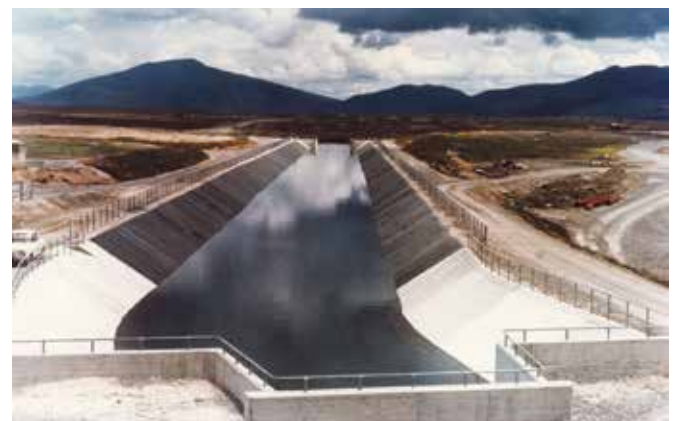
## ARDEX MEMBRANES IN AGRICULTURE

Water is vital to all forms of agriculture and its economic use is becoming increasingly important as demands for this vital fluid increase at a substantial rate.

The need for water storage increases directly in proportion to the demand for water as pure water becomes scarce. An efficient method of storing water is to line an excavated pond with a flexible membrane. This barrier prevents expensive seepage of stored water from the pond into the water table. For potable water, and in areas where airborne contamination is high, a floating roof can be installed which moves with fluctuations in water level and ensures the stored water remains protected from contamination and evaporation.



3.5 million litre irrigation pond



Te Whaia canal





## FARM RESERVOIRS

Today's farming calls for modern, low cost, high durability material, especially where water conservation for irrigation is concerned.

Farm reservoirs would normally be used to store water for irrigation or livestock, but they may also be used to store effluent or solutions of solid fertilizer. Because they are relatively small in size, it is often possible to line excavated farm reservoirs with one piece of sheeting, thereby eliminating the need for field splicing.

For a one piece installation, the sheet is anchored in a trench around the perimeter of the reservoir. The corners are accommodated by folding the sheet and placing the wide end of the fold in the anchor trench. Covered reservoirs can be used in conjunction with farm water supply schemes where larger storage than that of concrete tanks is necessary.

The cost of storing water in a covered pond is approximately 20% below that of concrete tanks when the farmer undertakes his own excavations. For larger capacity storage the percentage saved is considerably greater.

## PILLOW TANKS

Recommended for storage of untreated water. The need to be able to store surplus winter rain water for summer use is becoming very important for:

- HORTICULTURE
- FACTORY
- DOMESTIC
- POTABLE USE
- FIRE FIGHTING
- FRUIT CLEANING
- STOCK DRINKING WATER

In all these areas rain water may be collected from domestic houses, packing sheds and warehouse roofs or from a small hillside stream and stored in a pillow tank until required.

Pillow storage tanks are normally designed as economical storage for up to 227,000 litres, providing a totally enclosed, dust and contamination-free reservoir. Made from 1mm ARDEX Butynol®, they are simply placed in a shallow excavation with plumbing entering from below, as shown in diagram. The greatest advantages are low cost and ease of transportation.

## IMPORTANT POINTS TO NOTE

- Sand or crusher dust must be used for the finishing layer for excavation work.
- Embankments must NOT be greater than 30° slope.
- A pillow tank must always have a level control tank, to prevent over filling.
- The Butynol® floating top surface of the pillow tank must always remain unstressed.
- If a large volume of water is to be pumped out quickly, a Vortex plate must be fitted to the outlet pipe inside the tank.
- Consideration should be given to fencing if stock are present and to drainage of surplus rain water off embankment.
- High concentration of chlorine can be detrimental to Butynol. Please consult ARDEX New Zealand if concentrations above those found in drinking water are specified.

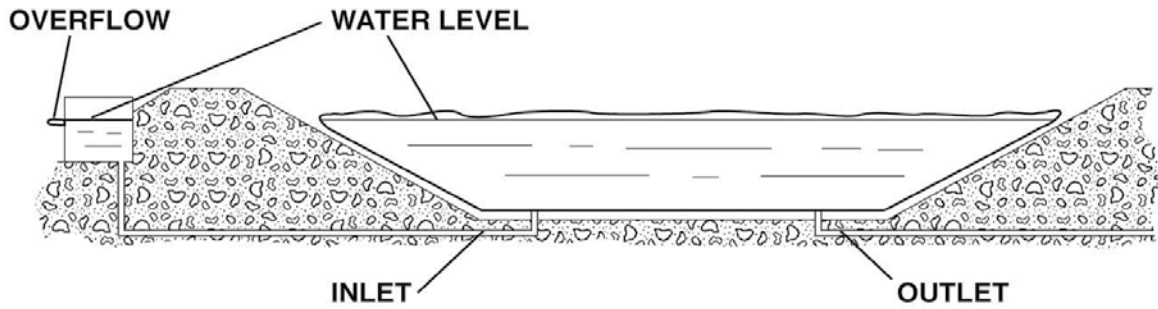


A pillow tank inflated for testing purposes in the Christchurch manufacturing plant.

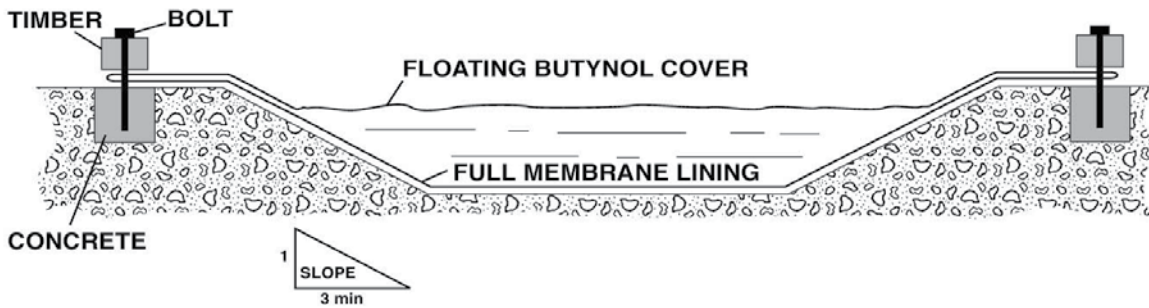


Storage pond for a golf club sprinkler system

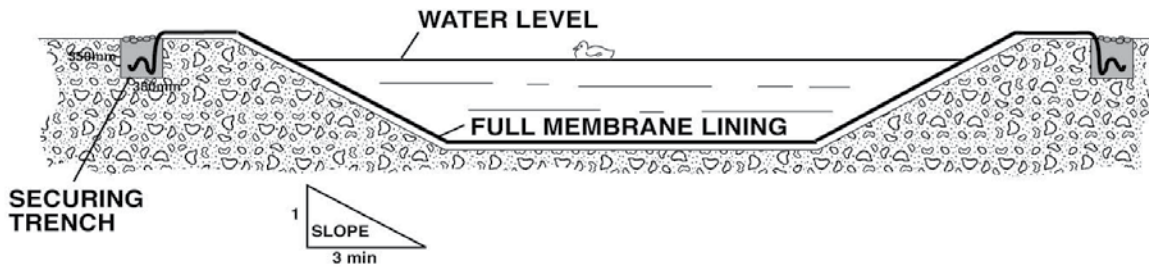
### Pillow tanks



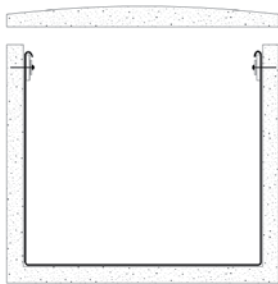
### Reservoirs



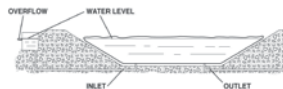
### Water Storage



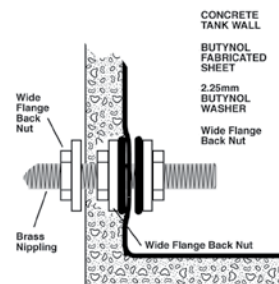
### Tank Liner



### Tank Wall Fitting



### Tank Outlet



ARDEX New Zealand Ltd Ph 0800 2 ARDEX www.ardex.co.nz

AUCKLAND Ph (09) 580 0005 Fax (09) 579 9963  
 WELLINGTON Ph (04) 568 5949 Fax (04) 568 6376  
 CHRISTCHURCH Ph (03) 373 6900 Fax (03) 384 9779



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