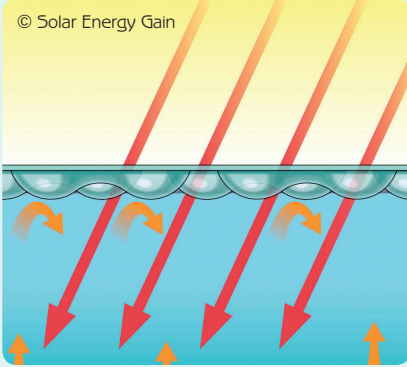


© Solar Energy Gain



The Sol+Guard™ material includes the engineered GeoBubble™ design. The new bubble design reduces stress points in the material that exist in the conventional bubble material designs. The unique, engineered GeoBubble™ shape provides a more uniform thickness throughout the bubbles. GeoBubble™ technology combined with the careful development of the UV stabilizers and other additives selected for the Sol+Guard™ material, creates a sustainable and innovative high performance cover. www.geobubble.co.uk

The innovative Sol+Guard™ swimming pool cover with GeoBubble™ technology is at the top of its class for allowing the maximum amount of solar energy gain, and saves chemicals, water, energy, time and money. The Sol+Guard™ material has a unique two ply combination where the clear top surface is designed to allow maximum solar gain to pass through. The translucent tinted GeoBubble™ shaped underside will also allow maximum solar gain to pass through.

A Sol+Guard™ cover will also help to gain and retain up to 70% of energy within the swimming pool water. As well as reducing water evaporation by 98%+ and chemical costs by up to 40%. The cover also prevents debris entering the pool.

The Method

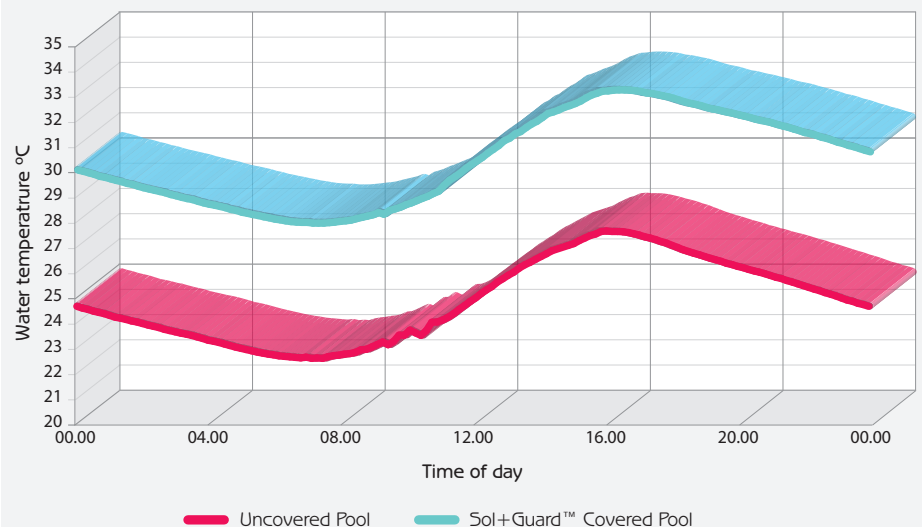
Tests were carried out in the United Kingdom between 2008 and 2010 in collaboration with the University of Brighton and the London Metropolitan University. Each pool was tested against an uncovered control pool.

Pool Temperature

The experiment indicated a temperature increase of 6°C, however, in hotter climates improved solar energy would increase the performance further to up to 8°C. The increased temperatures a Sol+Guard™ cover provides could extend a swimming pool season by over 2 months.

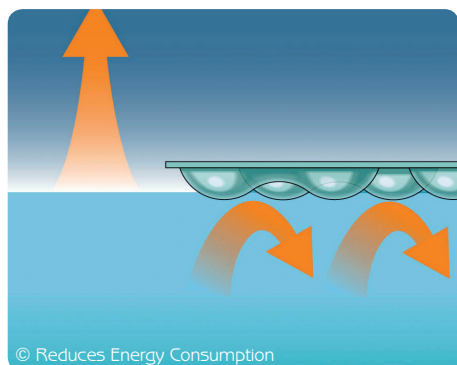
This experiment was conducted using two unheated outdoor pools in July 2009, in the United Kingdom, 3.66m diameter with a water depth of 0.565m. The temperature measurements were taken at 3 set depths throughout the pools, to gain an understanding of the covers effects throughout the water body in the test tank.

Up to 6°C Warmer



Sol+Guard™ Products Abilities

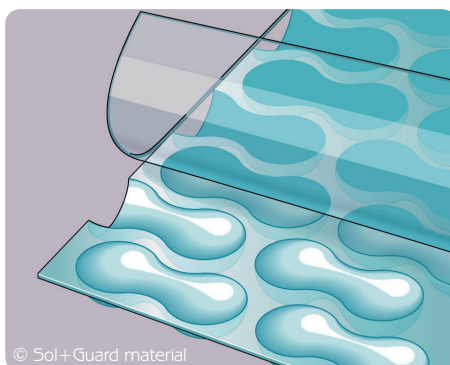
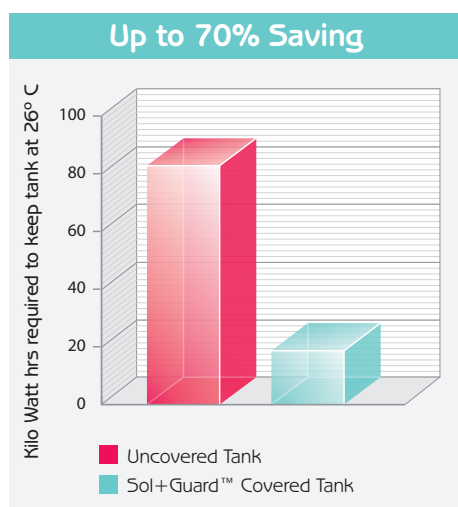
✓ Maximizes solar energy gain	✓ Up to 8°C increase
✓ Reduce energy consumption by over 70%	✓ Reduce debris contamination
✓ Reduce chemical consumption by up to 40%	✓ Save money
✓ Eliminate water evaporation by 98% +	✓ 6 year pro rata warranty



Energy Consumption

A Sol+Guard™ cover reduces energy consumption by maximising solar gain and preventing heat loss at night. The bar chart above highlights the amount of energy that can be saved by covering a pool with this high performance swimming pool cover. A Sol+Guard™ cover can reduce a pool heating bill by up to 70%.

The experiment was carried out using two 1m x 1.5m x 0.5m heated test tanks using a 500 W heater set to a thermostat at 26°C in the UK in July 2009. The amount of energy used to keep the pools at 26°C over an 8 day period was measured on a Sol+Guard™ covered and uncovered tank.

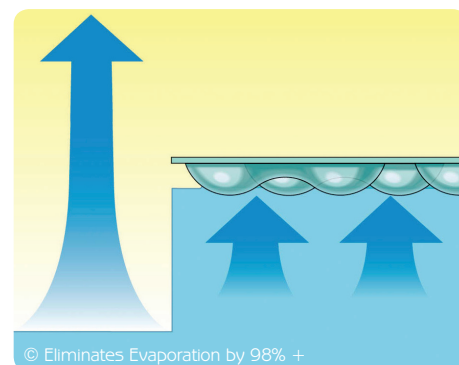
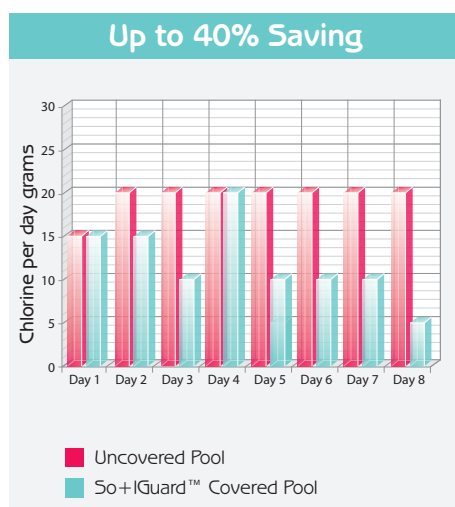


Chlorine Consumption

A Sol+Guard™ cover will save up to 40% of a pool's usual chemical consumption by:

- Preventing chemical loss through water evaporation
- Reducing debris entering the pool when covered.

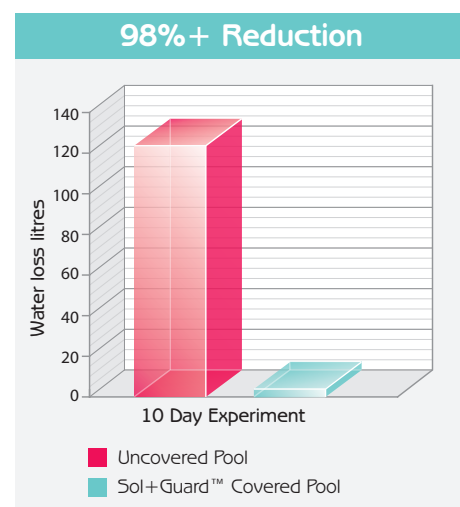
The experiment was conducted using two unheated outdoor pools 3.66m diameter with a water depth of 0.565m, in July 2009 in the United Kingdom. These tests required daily pool water monitoring to make adjustments to keep pools chlorine balanced within industry standards, between 2-4 (ppm) parts per million of free chlorine.



Evaporation Reduction

Sol+Guard™ cover will reduce water evaporation by over 98%; the reason for this is because by covering the pool, the material works as a barrier preventing the water escaping into the atmosphere.

The experiment was conducted using two 1 x 1.5 x 0.435m unheated outdoor tanks, July 2008 in the United Kingdom. The results show for an average sized pool, 4m x 8m, the water lost through evaporation is approximately 32,000 litres per year.



Sol+Guard™ material uses scientifically proven techniques and new innovations like the GeoBubble™ to make the product a resource saving material. All testing was carried out using strict scientific methods, to ensure the findings of this report are accurate. To see more information about Sol+Guard™ covers please visit

www.plastipack.co.uk/trans-ENGLISH/sol+guard.html

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