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**Technical Report: Chemical Resistance of Hyperdesmo-ADY-2K  
Resistance to Sodium Hypochlorite**

Exposure Procedure according to internal testing procedure

In order to access the resistance of Hyperdesmo-ADY-2K to sodium hypochlorite, the active chemical in chlorines and bleach, a pre-weighed free sample of the material is immersed in various concentrations of Sodium Hypochlorite ranging from 5-15% for a duration of 30 days.

Alchimica Test Procedure

***Apparatus:***

Air tight flasks 500 ml containing various concentrations of sodium hypochlorite.

***Sample Specimen***

The test specimen was a pre-weighed dumbbell with dimensions as described within ASTM D412: Sample Thickness 1mm, sample width 0.6mm, gauge length 4mm.

The sample was prepared from a random selection of batch numbers

***Procedure***

The samples were tested for mechanical properties and water tightness prior to being exposed to sodium hypochlorite.

Average Results:

Elongation: 100%

Tensile strength: 30 N/mm<sup>2</sup>,

water absorption :0.6%.

Samples prepared from the same batches are immersed in 3 solutions of Sodium Hypochlorite 5%, 10%, 15% in water. The samples are left immersed at room temperature for a period of 30 days.

**Results**

The samples are removed from the sodium hypochlorite solutions, washed with water and left for 1 hour in the oven at 80 °C to dry. After removal from the oven a visual examination takes place to establish whether the material is damaged. The samples were subsequently weighed and the mechanical property testing took place.

**Visual Examination:** No visible surface deterioration. No change in shape, cracking or blistering. The material retained its color almost 100%.

**Mechanical Properties:**

Average weight change(%): <2%

Average elongation: 80%

Average Tensile Strength: 26 N/mm<sup>2</sup>

Average water absorption: 0.6%

From the above it is clearly demonstrated that Hyperdesmo-ADY-2K has excellent resistance to chlorine environments and is therefore highly recommended for the waterproofing of swimming pools or tanks containing high concentrations of chlorine.

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