

# Technolab Ltd

ENGINEERING LABORATORY  
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Our Ref.: E131/09/A23

22 APRIL , 2009

Messrs  
K.CH.PERATIKOS LTD  
P.O.BOX 50137  
LEMESOS

**ATTN** : Mr. KYRIAKOS PERATIKOS

**REFERENCE** : RADMYX WATERPROOFING AGENT

**SUBJECT** : INVESTIGATION OF PROPERTIES

Dear Sirs,

In accordance with your request, we have performed laboratory trials on RADMYX WATERPROOFING AGENT sample , in order to investigate its properties as a superplasticizing agent.

The properties investigated were workability and compressive strength after addition of other plasticizing / retarding agents to the concrete mix.

Attached herewith please find the test results, presented in comparative Tables, together with our comments.

If you require any clarification regarding this report, please feel free to contact us.

Yours faithfully,

Maria Papa - Panayiotides  
Civil Engineer  
Manager

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**K.CH PERATIKOS LTD**

**RADMYX**

**PROPERTIES INVESTIGATION**

TECHNOLAB JOB : E131-09-A23

APRIL 2009

## TEST PROCEDURE

Five trial mixes were prepared for the test purpose.

In order to have comparable results, the aggregates, sand and cement, as well as the mix proportions and mixing procedure are maintained the same for all trial mixes.

The proportions of each constituent are based on the SSD weights of the aggregates and sand.

### 1. CONTROL MIX.

The mix composition is representative of the composition of concrete produced at most concrete batching plants in the Limassol area, using crushed diabase aggregates.

The control mix contains no admixture and serves as a comparison for the variation in workability and strength of the mixtures containing the admixture under test.

### 2. TRIAL MIX A : ADDITION OF RADMYX WATERPROOFING AGENT

This has the same composition as the Control Mix, but with the addition of RADMYX at the rate of  $5\text{kg/m}^3$ .

### 3. TRIAL MIX B

This has the same composition as Trial Mix A , but with the addition of VIMATOL SPL Concrete Superplasticiser at the recommended average dosage of 0,65% by weight of cement.

### 4. TRIAL MIX C

This has the same composition as Trial Mix A , but with the addition of VIMATOL PL Water reducer /Concrete plasticiser at the recommended average dosage of 0,55% by weight of cement.

### 5. TRIAL MIX D

This has the same composition as Trial Mix A , but with the addition of FLUIMAX 2HS Super Fluidifying additive at the recommended average dosage of 1,1% by weight of cement.

**RADMYX**

MATERIALS	QUANTITY / m <sup>3</sup> (Kg)				
	CONTROL MIX (C.M.)	C.M. + RADMYX (5Kg/6m <sup>3</sup> )	C.M. + RADMYX (5Kg/6m <sup>3</sup> ) + VIMATOL-SPL (0,65% by cement weight)	C.M. + RADMYX (5Kg/6m <sup>3</sup> ) + VIMATOL-PL (0,55% by cement weight)	C.M. + RADMYX (5Kg/6m <sup>3</sup> ) + FLUIMAX 2HS (1,1% by cement weight)
20mm	520	520	520	520	520
10mm	390	390	390	390	390
Sand Z1	460	460	460	460	460
Sand Z3	410	410	410	410	410
CEMENT	360	360	360	360	360
WATER	200	200	200	200	200
ADDITIVE	—————	0,833kg	0,833kg + 2,4 lt/m <sup>3</sup>	0,833kg + 1,98 lt/m <sup>3</sup>	0,833kg + 3,96 lt/m <sup>3</sup>
W/C Ratio	0,55	0,55	0,55	0,55	0,55
WORKABILITY (mm)					
Initial	100	130	230	220	Collapse
15 min	95	120	215	200	«
30 min	85	100	200	190	«
45 min	70	95	190	180	«
60 min	65	80	175	170	210
90 min	55	70	150	160	180
120 min		60	125	145	160
150 min			100	125	140
180 min				100	120
210 min					100
STRENGTH (N/mm <sup>2</sup> )					
3 days	18,2	20,9	18,1	15,4	15,1
7 days	22,9	25,1	26,0	24,1	21,0
28 days	37,1	38,9	38,4	38,4	35,8