



NATIONAL RESEARCH CENTRE
TAHRIR St. DOKKI, CAIRO, EGYPT
Central Unit For Analysis And
Scientific Services (CUASS)
Material Test Lab.

المركز القومي للبحوث
الدقى . القاهرة . جمهورية مصر العربية
وحدة التحاليل و الخدمات العلمية المركزية
معمل اختبار المواد



Test Report

Report No.	MOI 8324 04 2022
Client	CHEMA FOAM CO.
Authority & date	Request Orders 11/4/2022
Items Tested	CHEMA PROOF 111
Results	The detailed test results are given on the following pages of this report (5 pages) .
Report Typist	* Mis. Naglaa Mohamed-Sara Abdel Reheam
Test carried by	Noha Samir * Mis . Fatma El Zahraa Fikry * H.Eng. Ahmed Said * Chem. Amr El Shafey * Dr. Abou El Ftouh Abd El Hakem
Authorized by	Prof. Dr. Mostafa Zaki Mostafa * The Supervisor of ceramics, Polymer and Solid Matter Department. * Management Representative and Quality Assurance Manager.
Issue date	17/5/2022
Condition of Test & Issue	The test speciemen was conditioned at 23 °C with a humidity of 60 % and the needed calibrations as well as balancing of the all used machines were always done .


A. Abdelhakem





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To / CHEMA FOAM CO.

Dear Sir.,

With correspondence to your request dated 11/4/2022 concerning the testing samples of CHEMA PROOF 111 , We would like to inform you that the all following needed tests were carried out which namely:

- 1- Compressive strength test after 28 days according to ASTM C109**
- 2- Tensile strength and Elongation Test according to ASTM D 412**
- 3- Adhesion strength test after 28 days according to ASTM C321**
- 4- Water permeability test according to CRD C48**
- 5- Crack bridging test according to ASTM C1305**

We would like to inform you that the needed test was carried out taking into consideration the following conditions :

- 1- In all mechanical properties GALDABINI – QUASAR 600 – Made In Italy Universal Testing Machine was used This type has a self calibration , zero adjusting and automatic balance , which are done daily before testing or during testing this testing instrument is accompanied by a highly reliable system for evaluating the mechanical properties .*
- 2-Measuring drum of sensitivity ± 0.01 mm was used for dimensions evaluation.*
- 3- On heating a Memmert West Germany oven was used .*
- 4- Weighing Balance with tolerance + 0.0001 g was used in determining the weights .*
- 6- All used Machineries and apparatuses were calibrated periodically*

The following tables give the obtained results representing the sample delivered from your company .





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Test results on a sample of CHEMA PROOF 111

Delivered from CHEMA FOAM CO.

1- Compressive strength test after 28 days

according to ASTM C109

No.	Compressive strength (N/mm ²)	The mean (N/mm ²)
1	49.11	49.80
2	49.93	
5	50.37	

2- Tensile strength and Elongation Test

according to ASTM D 412

No.	Tensile strength (N/mm ²)	Elongation (%)
1	7.91	72.01
2	8.25	68.45
3	8.19	69.33
Mean	8.11	69.93

3- Adhesion strength test after 28 days

according to ASTM C321

No.	Adhesion strength (N/mm ²)	The mean (N/mm ²)
1	1.33	1.46
2	1.49	
5	1.58	

A. A. Abdelkader





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Test results on a sample of CHEMA PROOF 111

Delivered from CHEMA FOAM CO.

4- Water permeability test according to CRD C48

* *The sample with a thickness 2mm un permeable up to 3 bars water pressure .*

5- Crack bridging test according to ASTM C1305

No.	No. of cycles	Maximum (mm) movement	Observation
1		1.5	
2	10	1.5	No failure
3		1.5	

* *The sample resist the crack (1.5mm) without any observable changed .*





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*This report was given to you representing only the results for the testing sample of CHEMA PROOF 111 , Delivered from CHEMA FOAM CO., These results and conclusions were given to you without any responsibility on **THE CERAMICS, POLYMERS AND SOLID MATTER DEP. of THE MATERIAL TEST LAB in THE NATIONAL RESEARCH CENTRE** for pick up the samples to be tested .*

**Head of Director of The Board of Central Department
for Scientific Analysis and Tests**

&

**SUPERVISOR
OF CERAMICS, POLYMER AND
SOLID MATTER DEPARTMENT**
A. A. Abdelhakeem
PROF.DR. MOSTAFA ZAKI MOSTAFA

