



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.	MO1 8325 04 2022
Client	CHEMA FOAM CO.
Authority & date	Request Orders 11/4/2022
Items Tested	CHEMA PROOF 107
Results	<i>The detailed test results are given on the following pages of this report (5 pages) .</i>
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	<i>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 .</i>





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معمل اختبار المواد

To / CHEMA FOAM CO.

Dear Sir.,

With correspondence to your request dated 11/4/2022 concerning the testing samples of CHEMA PROOF 107 , 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 $\pm 0.01mm$ 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 .



Test results on a sample of CHEMA PROOF 107

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	39.32	40.30
2	41.01	
5	40.57	

2- Tensile strength and Elongation Test

according to ASTM D 412

No.	Tensile strength (N/mm ²)	Elongation (%)
1	5.01	40.11
2	4.93	41.21
3	4.88	38.21
Mean	4.94	39.84

3- Adhesion strength test after 28 days

according to ASTM C321

No.	Adhesion strength (N/mm ²)	The mean (N/mm ²)
1	1.21	1.23
2	1.26	
5	1.22	

A. A. Abd Elhalek
وحدة التحاليل و الخدمات العلمية المركزية



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Test results on a sample of CHEMA PROOF 109

Delivered from CHEMA FOAM CO.

4- Water permeability test according to CRD C48

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

5- Crack bridging test according to ASTM C1305

<i>No.</i>	<i>No. of cycles</i>	<i>Maximum (mm) movement</i>	<i>Observation</i>
<i>1</i>		<i>0.5</i>	
<i>2</i>	<i>10</i>	<i>0.5</i>	<i>No failure</i>
<i>3</i>		<i>0.5</i>	

* *The sample resist the crack (0.5mm) 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 107 , 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**

PROF.DR. MOSTAFA ZAKI MOSTAFA

