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

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

# Test Report

| | |
|---|---|
| ***Report No.*** | ***MO1 0987 02 2023*** |
| ***Client*** | ***CHEMA FOAM CO.*** |
| ***Authority & date*** | *Request Orders 6/2/2023* |
| ***Items Tested*** | ***CHEMA bond*** |
| ***Results*** | *The detailed test results are given on the following pages of this report ( 4 pages) .* |
| ***Report Typist*** | **** Mis. Naglaa Mohamed-Sara Abdel Reheam Noha Samir*** |
| ***Test carried by*** | **** 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*** | *15/3/2023* |
| ***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 .* |

شارع التحرير - الدقى - القاهرة
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داخلى ١٨١٠ ١٤٢٤
٣٣٣٧١٣٦٢ - ٣٣٣٧١٦١٥
٣٣٣٥٥١٩٢ - ٣٧٦٠٧٥٤١
E-mail : nrc1302a@yahoo.com

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***To / CHEMA FOAM CO.***

***Dear Sir.,***

*With correspondence to your request dated 6/2/2023 concerning the testing sample of CHEMA bond , We would like to inform you that the all following needed tests were carried out which namely:*

***1- Compressive strength test on concrete + chema bond after 28 days according to ASTM C109***

***2- Flexural strength test on concrete + chema bond after 28 days according to ASTM C580***

***3- Bond strength test to concrete (Slant-shear) (dry) by using CHEMA bond after 28 days according to ASTM C1042***

*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 .*

*5-Water Permeability tester model 55CO24613Controls made in Italy*

*6- All used Machineries and apparatuses were calibrated periodically*

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

2023

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## *Test results on a sample of CHEMA bond*

## *Delivered from CHEMA FOAM CO.*

### *1- Compressive strength test on concrete + chema bond after 28 days according to ASTM C109*

| *No.* | *Control (N/mm2)* | *Concrete + chema bond (N/mm2)* |
|---|---|---|
| *1* | *23.11* | *37.14* |
| *2* | *23.51* | *39.53* |
| *3* | *21.73* | *36.29* |
| *4* | *21.92* | *35.26* |
| *5* | *22.81* | *34.93* |
| *Mean* | *22.62* | *36.63* |

### *2- Flexural strength test on concrete + chema bond after 28 days according to ASTM C580*

| *No.* | *Control (N/mm2)* | *Concrete + chema bond (N/mm2)* |
|---|---|---|
| *1* | *7.73* | *11.18* |
| *2* | *6.92* | *11.65* |
| *3* | *6.99* | *11.29* |
| *4* | *7.07* | *11.33* |
| *5* | *7.13* | *11.19* |
| *Mean* | *7.17* | *11.33* |

### *3- Bond strength test to concrete (Slant-shear) (dry) by using CHEMA bond after 28 days according to ASTM C1042*

| *No.* | *Bond strength (N/mm2)* | *The mean (N/mm2)* |
|---|---|---|
| *1* | *3.31* | *3.21* |
| *2* | *3.09* | |
| *5* | *3.23* | |

المركز القومى للبحوث
وحدة التحاليل والخدمات العلمية المركزية
3 / 2023

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*This report was given to you representing only the results for the testing sample of CHEMA bond , 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 Depertment for Scientifical Analysis and Tests***

***&***

***SUPERVISOR OF CERAMICS, POLYMER AND SOLID MATTER DEPARTMENT***

***PROF.DR. MOSTAFA ZAKI MOSTAFA***

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