

# المركز القومى للبحوث

الدقى . القاهرة . حمهورية مصر العربية وحدة التحاليل والخدمات العلمية المركزية معمل اختبار المواد

Test Report

| Report No.                    | MO1 3580 07 2020   |
|-------------------------------|--|
| Client                        | Tri chem construction chemicals  |
| Authority & date              | Request Orders 13/7/2020   |
| Items Tested<br>Results       | Tri-Fix G  The detailed test results are given on the following pages of this report (5 pages).  |
| Report Typist Test carried by | * Mis. Naglaa Mohamed-Sara Abdel Reheam Noha Samir   |
| Test curried 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                    | 23/8/2020  |
| Condition of Test             | The test speciemen was conditioned at 23 °C  |
| & Issue                       | with a humidity of 60 % and the needed   |
|                               | calibrations as well as balancing of the all   |
|                               | used machines were always done .   |
| The street                    | The state of the s |

(1/5 - 3580)

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#### To / Tri chem construction chemicals

#### Dear Sir.,

With correspondence to your request dated 13/7/2020 concerning the testing sample of Tri-Fix G, We would like to inform you that the all following needed tests were carried out which namely:

- 1- Initial tensile adhesion strength test after 28 days (Regular condition) according to EN 12004-2-2017
- 2- Tensile adhesion strength test after 20 days water immersion according to EN 12004-2-2017
- 3- Tensile adhesion strength test after 14 days heat ageing at 70°C according to EN 12004-2-2017
- 4- Open time test according to EN 12004-2-2017
- 5- Vertical slip test according to EN 12004-2-2017

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  $\pm 0.01$ 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.
- 5- JSR digital water bath model JSWB 30T made in Korea.
- 5- All used Machineries and apparatuses were calibrated periodically

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

(2/5-3580)

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### Test results on a sample of Tri-Fix G

#### Delivered from Tri chem construction chemicals

#### 1- Initial tensile adhesion strength test after 28 days

### (Regular condition) - according to EN 12004-2-2017

| No. | Results<br>(N/mm2) | The mean value (N/mm2) | EN 12004 C1 limit<br>(N/mm2) |
|-----|--------------------|------------------------|------------------------------|
| 1   | 0.81               |                        |                              |
| 2   | 0.77               |                        |                              |
| 3   | 0.71               | 0.754                  | ≥ 0.5                        |
| 4   | 0.73               |                        |                              |
| 5   | 0.75               |                        |                              |

<sup>\*</sup> Failure pattern CF-A

#### 2- Tensile adhesion strength test after 20 days water immersion according to EN 12004-2-2017

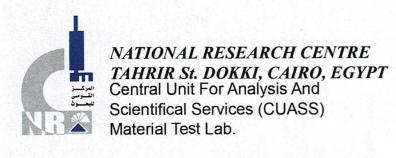
| No. | Results<br>(N/mm2) | The mean value (N/mm2) | EN 12004 C1 limit<br>(N/mm2) |
|-----|--------------------|------------------------|------------------------------|
| 1   | 0.71               |                        |                              |
| 2   | 0.65               |                        |                              |
| 3   | 0.62               | 0.652                  | ≥ 0.5                        |
| 4   | 0.65               |                        |                              |
| 5   | 0.63               |                        |                              |

\* Failure pattern CF-A



(3/5 - 3580)





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# Test results on a sample of Tri-Fix G Delivered from Tri chem construction chemicals

## 3- Tensile adhesion strength test after 14days heat ageing at 70°C according to EN 12004-2-2017

| No. | Results<br>(N/mm2) | The mean value (N/mm2) | EN 12004 C1limit<br>(N/mm2) |
|-----|--------------------|------------------------|-----------------------------|
| 1   | 0.63               |                        |                             |
| 2   | 0.67               |                        |                             |
| 3   | 0.61               | 0.636                  | $\geq 0.5$                  |
| 4   | 0.65               |                        |                             |
| 5   | 0.62               |                        |                             |

<sup>\*</sup> Failure pattern CF-A

4- Open time test according to EN 12004-2-2017

Open time = 51 min

5- Vertical slip test according to EN 12004-2-2017

Vertical slip = 0.27 mm

(4/5 - 3580)

مباشر ۳۳۳۸۷۸۰۳ وفاكس

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معمل اختبار المواد

This report was given to you representing only the results for the testing sample of Tri-Fix G, Delivered from Tri chem construction chemicals, These results and conclusions were given to you without any responsibility on THE CERAMICS, POLYMERS AND SOLID **THE** THE MATERIAL TEST LAB MATTER DEP. of 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

AKI MOSTAFA PROR

(5/5-3580)

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