



# Test Report

**Report No.**

**Client**

**Authority & date**

**Items Tested**

**Results**

**Report Typist**

**Test carried by**

**Authorized by**



**Issue date**

**Condition of Test  
& Issue**

**MO1 3034 06 2021**

**CHEMA FOAM Co.**

**Request Orders 2/6/2021**

**3 Samples of XPS blue foam thickness 50mm**

The detailed test results are given on the following pages of this report ( 9 pages) .

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\* **The Supervisor of ceramics, Polymer and Solid Matter Department.**

\* **Management Representative and Quality Assurance Manager.**

**10/6/2021**

The test specimen 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





**To / CHEMA FOAM Co.**

*Dear Sir.,*

With correspondence to your request dated 2/6/2021 concerning the testing samples of XPS blue foam thickness 50mm , We would like to inform you that the all following needed tests were carried out which namely:-

- 1- Density Test according to ASTM D1622
- 2- Compressive strength at 10% deflection according to ASTM D1621
- 3- Flexural Strength Test according to ASTM C203
- 4- Water absorption test according to ASTM C272
- 5- Water vapor transmission test according to ASTM E96
- 6- Dimension Stability Test according to ASTM D696.

We would like to inform you that the all needed tests were 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- On heating a Memmert West Germany oven was used .
- 3- Weighing Balance with tolerance + 0.0001 g was used in determining the weights .
- 4- Measuring drum of sensitivity + 0.01mm was used for dimensions evaluation
- 5-The all used Machinery and the apparatus were calibrated periodically

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

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***Density Test according to ASTM D1622***

*On a sample of XPS blue foam thickness 50mm Density 30 Kg/m<sup>3</sup>*

**Delivered from CHEMA FOAM Co.**

No.	Density (Kg/m <sup>3</sup> )	The mean (Kg/m <sup>3</sup> )	Technical data (Kg/m <sup>3</sup> )
1	31.31	31.338	> 30
2	31.44		
3	31.35		
4	31.27		
5	31.32		

**Compressive strength at 10% deflection according to ASTM D1621**

No.	Compressive strength (Kpa)	The mean (Kpa)	Technical data (Kpa)
1	306.27	309.752	> 300
2	308.61		
3	313.16		
4	312.65		
5	308.07		

**Flexural strength Test according to ASTM C203**

No.	Flexural strength (Kpa)	The mean (Kpa)
1	445.12	441.776
2	444.37	
3	439.32	
4	428.01	
5	452.06	



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***Water absorption test according to ASTM C272***

*On a sample of XPS blue foam thickness 50mm Density 30 Kg/m<sup>3</sup>*

**Delivered from CHEMA FOAM Co.**

No.	Volume change (%)	The mean (%)	Technical data (%)
1	0.215	0.223	< 1
2	0.226		
3	0.231		
4	0.223		
5	0.221		

**Water vapor Transmission test according to ASTM E96**

- WVT at thickness 10mm = 0.65 g/h.m2.

**Dimension stability Test according to ASTM D696**

No.	Volume change (%)	The mean (%)
1	0.181	0.180
2	0.181	
	0.178	



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

**المركز القومي للبحوث**  
الدقي . القاهرة . جمهورية مصر العربية  
وحدة التحاليل والخدمات العلمية المركزية  
معمل اختبار المواد



*This report was given to you representing only the results for the delivered samples of XPS blue foam thickness 50mm, 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 .*

*These results up resent only the delivered sample and not any stored or produced quantities for any other purpose or project, Unauthorized reproduction of this report or copy of it by any way or for any target is prohibited .*

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

**&**

**SUPERVISOR OF Material Test Lab**

**PROF.DR. MOSTAFA ZAKI MOSTAFA**



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