



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

**المركز القومي للبحوث**

الدقي . القاهرة . جمهورية مصر العربية  
وحدة التحاليل و الخدمات العلمية المركزية  
معمل اختبار المواد



## Test Report

**Report No.**

**Client**

**Authority & date**

**Items Tested**

**Results**

**Report Typist**

**Test carried**

**and supervised by**

**Authorized by**

**Issue date**

**Condition of Test  
& Issue**

**MO1 7112 04 2025**

**DIAR for Special works**

**Request Orders 9/4/2025**

**Sample of Voga EPDM**

The detailed test results are given on the following pages  
of this report (5 pages).

\* **Mis. Sara Abdel Rehim – Naglaa Mohamed**

\* **Mis . Fatma El – Zahraa Fikry**

\* **H.Eng. Ahmed Sayed**

\* **Chem. Amr El Shafey**

\* **Dr. Abou El Ftouh Abd El Hakem**

**Prof. Dr. Mostafa Zaki Mostafa**

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

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

**7/8/2025**

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 .







**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 و الخدمات العلمية المركزية  
معمل اختبار المواد



**To General Manager of / DIAR for Special works**

**Dear Sir.,**

With correspondence to your request dated 9/ 4 /2025 concerning the testing Sample of Voga EPDM , We would like to inform you that the all following needed tests were carried out which namely :-

- 1) Shore Hardness test according to ASTM D2240.
- 2) Specific gravity test according to ASTM D792.
- 3) Tensile Strength test & Elongation according to ASTM D412.
- 4) Artificial weathering test according to ASTM G154.
- 5) Water Resistance test according to ASTM D870.
- 6) Heat Resistance test according to ASTM D2485.

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- Testing Machine was used This type of GALDABINI 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.

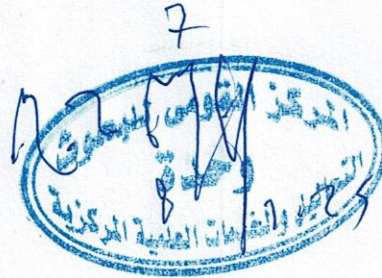
2-Weighing Balance with tolerance+0.0001g was used in determining the weights

3-Measuring drum of sensitivity+0.01mm was used for dimensions evaluation

4- Braive Instruments for Shore A Test.

5- The all used Machinery and the apparatus were calibrated periodically .

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







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

**المركز القومي للبحوث**

الدقي . القاهرة . جمهورية مصر العربية  
وحدة التحاليل و الخدمات العلمية المركزية  
معمل اختبار المواد



### **Test Results**

*On a Sample of Voga EPDM*

**Delivered from DIAR**

#### **(1) Shore Hardness test according to ASTM D2240**

No.	Shore A	Shore D
1	65	22
2	66	22
3	65	23
4	65	23
5	65	24
The mean	65	23

#### **(2) Specific gravity test according to ASTM D792**

No.	Specific gravity Sample	Specific gravity Applied Sample
1	1.173	0.813
2	1.194	0.822
3	1.182	0.807
The mean	1.183	0.814

#### **(3) Tensile Strength test & Elongation according to ASTM D412**

No.	Tensile (N/mm <sup>2</sup> )	Elongation (%)
1	1.34	2.88
2	1.57	3.01
3	1.66	3.09
The mean	1.52	2.99







**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 و الخدمات العلمية المركزية  
معمل اختبار المواد



**Test Results**  
**On a Sample of Voga EPDM**  
**Delivered from DIAR**

**(4) Artificial weathering test according to ASTM G154**

Exposure Time (h)	Exposure Temp. (°C)	Light source	Irradiance (W/m <sup>2</sup> )	$\Delta E$	Observation
500	60	340 UV-A cycle 1 Fluorescent Lamp	0.89	3.37	No crack or any effect was observed

**(5) Water Resistance test according to ASTM D870**

Time (h)	Temp. (°C)	Result	Weight change (%)
24	38	No effect	+ 3.27

**(6) Heat Resistance test according to ASTM D2485**

Time (h)	Temp. (°C)	Result	Weight change (%)
8	200	No effect	- 1.78







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

**المركز القومي للبحوث**

الدقي . القاهرة . جمهورية مصر العربية  
وحدة التحاليل و الخدمات العلمية المركزية  
معمل اختبار المواد



*This report was given to you representing only the results for testing Sample of Voga EPDM , 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 represent only the delivered sample and not any stored or produced quantities for any other purpose or project, Unauthorized reproduction of this report or any 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 MOSTAF**

*[Handwritten signature and blue circular stamp of the National Research Centre]*

