



**AL MANARATAIN**

AL MANARATAIN COMPANY AND ALI AL SHAAB GROUP W.L.L.

# SANDWICH INSULATION BLOCK



## INSULATION SANDWICH BLOCK :

Our insulated blocks are manufactured with expanded polystyrene inside. This gives excellent thermal insulation ( Low U-Value ). The U-Value of building component ( Walls, Roofs, Windows ) is a measurement for heat transfer which passes between room and exterior and which must be replaced by cool air produced by air conditioners. There for a low U-Value is key to saving in A/C cost.

## 12" SANDWICH BLOCK SPECIFICATION

- ❖ Dimensions 400 × 300 × 200 mm
- ❖ Dimensional Tolerance Category D1
- ❖ Normalized Compressive Strength  $\geq 7.5$  N/mm<sup>2</sup>
- ❖ Weight 31 Kg
- ❖ Gross Dry Density 2323 Kg/m<sup>3</sup>
- ❖ R-Value 2.1151 ( m<sup>2</sup> °C / W)
- ❖ U-Value (15mm Plaster) 0.472 ( W / m<sup>2</sup> °C)
- ❖ Standards BS EN 771 - BS EN 772



إدارة ترشيد الكهرباء والماء  
Electricity & Water Conservation Directorate

### شهادة تسجيل منتج عزل حراري Registration Certificate of Thermal Insulation Product (Ministerial Order No. 149/2018)

Certificate No:	TIP22057	رقم الشهادة:
Registration Date:	22/11/2022	تاريخ الإصدار:
Issued to:	Al Manarain Company and Ali Alsheab Grp Kingdom of Bahrain	أصدرت إلى:
Product Name:	12" Sandwich Block	اسم المنتج:
Application For:	Wall	الاستخدام في:
Manufacturer Name:	Al Manarain Company and Ali Alsheab Grp Kingdom of Bahrain	اسم المصنع:
Valid Until:	30/11/2024	تاريخ الصلاحية:

تفاصيل المنتج / Product Details	
Description	400x300x200mm - Concrete Masonry Insulation Block with two cavities & 75mm thick of Expanded Polystyrene sheet between the two layers of concrete.
Density (kg/m <sup>3</sup> )	Concrete: 2290 Bahrain Expanded polystyrene: 33.33
Min. Thickness (mm)	Sandwich Block: 300
Thermal Conductivity k (W/m °C)	0.1583
Thermal Transmittance / Conductance C (W/m <sup>2</sup> °C)	0.528

- Conditions:**
- The above thermal insulation product is to be used as described above, provided the overall U-value for the wall does not exceed 0.57 W/m<sup>2</sup> °C.
  - The owner should take the necessary precautions to ensure proper storage and installation of the product to protect it from moisture and direct sunlight.
  - The owner of this product is responsible of ensuring that the product is carried out by him or an approved applicator, for supplying all the accessories associated with it, and for any consequences that may result from the use of this product.
  - The owner of this product is responsible of ensuring that the expanded polystyrene sheets are properly fit and tightly installed between the layers of concrete during manufacturing phase and subsequent transportation, storage and installation of the product.
  - All documents published by the owner for the above product should not contradict with the thermal conductivity value stated in this certificate.
  - This approval is granted for thermal insulation only. Any additional approvals / permissions required should be sought from the concerned authorities.
  - The TIU should not be held responsible for any consequences that may result from the use of this product.
  - The TIU reserves the right in future to request additional documents and to withdraw its approval of the above if any variations are noticed.



Electricity Conservation Section





شهادة تسجيل منتج عزل حراري  
**Registration Certificate of Thermal Insulation Product**  
(Ministerial Order No. 149/2018)

**Certificate No:** TIP22057 **رقم الشهادة:**  
**Registration Date:** 22/11/2022 **تاريخ الإصدار:**  
**Issued to:** Al Manartain Company and Ali Alsheab Grp **أصدرت إلى:**  
Kingdom of Bahrain  
**Product Name:** 12" Sandwich Block **اسم المنتج:**  
**Application For:** Wall **الاستخدام في:**  
**Manufacturer Name:** Al Manartain Company and Ali Alsheab Grp **اسم المصنع:**  
Kingdom of Bahrain  
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**Electricity Conservation Section**

Kingdom of Bahrain		مملكة البحرين
Electricity & Water Authority		هيئة الكهرباء والماء
Electricity & Water Conservation Directorate		إدارة ترشيد الكهرباء والماء

• *Thermal Transmittance (U-Value) for external Walls with Blocks*

Sr. No.	Description of materials used	Density kg/m <sup>3</sup>	Thickness (I) m	$\frac{r}{m.k}$ w	$\frac{R}{m^2.k}$ w	Notes
1-	Ext.Surface Resistance				0.0590	
2-	External Plaster	1800	0.015	1.333	0.0200	k=0.75
3-	12 Inch Sandwich Block	1200	0.300	6.317	1.8951	k=0.1583
4-	Internal Plaster	1800	0.015	1.333	0.0200	k=0.75
5-	Int.Surface Resistance				0.1210	
6-						
7-						
8-						
9-						
10-						
11-						
12-						
13-						
<b>Total thermal resistance for materials used in Wall (R<sub>T</sub>):</b>					<b>2.1151</b>	

<b>U-Value = 0.472      W/m.<sup>2</sup> °C</b>
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\_\_\_\_\_  
Client's Name  
& Signature

\_\_\_\_\_  
In charge Engineer  
Name & Signature

\_\_\_\_\_  
Engineering Office  
Stamp & Signature

\_\_\_\_\_  
Electricity & Water Authority Approval

\_\_\_\_\_  
Date of Approval



مذكرة

MEMORANDUM

Ref.: MED/C&RS/M-312/2022

Date: 25<sup>th</sup> May 2022

To : Directors,  
SEPPD, SEOMD, RPDD,  
RPMD, BMD, CPD, SPD

From : Director,  
Materials Engineering Directorate

## Material Compliance Report (MCR)

We wish to advise that *Al Manaratain Company & Ali Alsheab Group WLL (Bahrain)* had requested us to assess their *Concrete Masonry Blocks strength grade 7.5MPa* manufactured by *Al Manaratain Company & Ali Alsheab Group WLL (BAHRAIN)* for consideration in MoW projects.

Following MED standard procedure for assessing materials/products, please find attached for your information Material Compliance Report (MCR 4700/2022) for the aforementioned products.

This addition/renewal will be uploaded on our Pre-Qualification List for Materials which is available and updated monthly in our Ministry's Portal.

For any further clarification, please do not hesitate to contact the undersigned or the Chief of Consultancy and Research Section at 1781 2450.

Regards,

Amal Abdulnabi Khalaf

cc : Section Chief CRS / MAS File 5584 - CEMCG



الحائزة على جائزة القائمة العالمية  
للمتميزين في تنفيذ الإستراتيجية

2009

ص.ب: ٥، المنامة، مملكة البحرين

P.O. Box 5, Manama, Kingdom of Bahrain





### Consultancy & Research Section

## Material Compliance Report (MCR) 4700/2022 (For Ministry of Works projects)

<b>Material Detail:</b>	<b>Concrete Masonry Blocks Strength Grade 7.5MPa</b> (50% RAK Aggregate + 50% Recycled Concrete Aggregate - Grade 1) • For Models as per Attachment 1
<b>Manufacturer:</b>	Al Manaratain Company & Ali Alsheab Group W.L.L., Bahrain
<b>Applicant:</b>	Al Manaratain Company & Ali Alsheab Group W.L.L. P. O. Box 926 Al Burhama, Manama, Kingdom of Bahrain

Following MED standard procedures for assessment and technical evaluations of the above Material, as to compliance with the Ministry of Works' specifications and requirements, we advise as per the following details:

#### i. Compliance with Relevant Standards & Specifications

✓	Acceptable
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#### ii. Adequacy for use in Ministry of Works projects

✓	Suitable for use with conditions. Please refer to comments below.
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#### iii. Comments

- This approval does not cover the Insulation/Thermal, Acoustic and Fire Resistance Properties.
- This approval does not cover the insulation material (inserts) for Insulated Blocks.
- This product is permitted only to non-load bearing walls only and shall be utilized only on walls without steel embedment or reinforcement.
- The product when tested should adhere to **EN 771-3:2011** and shall always conform to the Standard Specifications for Construction Works - 2019 of the MOW projects.
- This compliance report does in no way relieve the supplier or contractor of their obligation with respect to obtaining the necessary approval of the concerned Project Engineer for a specific project.
- The material will be subject to factory inspection and periodic quality control assessment by the Materials Engineering Directorate personnel.

#### Note:

This Report is valid for maximum of 1 year(s) from the date of this Report **unless otherwise stated** or there is a change / revision in the material technical specifications, manufacturing process or relevant Standards & Specifications requirements.

Signed & stamped by,

Date: 25<sup>th</sup> May 2022

MAS File 5584 / CEMCG

Director, Materials Engineering Directorate



المائزة على جائزة القائمة العالمية  
للمتميزين في تنفيذ الاستراتيجيات  
2009

ص.ب: ٥، المنامة، مملكة البحرين

P.O. Box 5, Manama, Kingdom of Bahrain



**Concrete Masonry Blocks Strength Grade 7.5MPa, Manufactured & Supplied by Al Manaratain Company & Ali Alsheab Group W.L.L.**

**MAS 5584 - MCR 4700/2022  
Attachment 1- List of Approved Models**

NO.	PRODUCT NAME / DESCRIPTION
1	<b>Hollow Blocks Sizes:</b> <ul style="list-style-type: none"><li>(100/150/200/250/300) mmx200mmx400mm</li><li>(90/140/190/290) mmx190mmx390mm</li></ul>
2	<b>Half Blocks Sizes:</b> <ul style="list-style-type: none"><li>200mmx200mmx200mm &amp; 190mmx190mmx190mm</li></ul>
3	<b>Solid Blocks Sizes:</b> <ul style="list-style-type: none"><li>200mmx200mmx400mm</li></ul>
4	<b>Insulation Blocks Sizes:</b> <ul style="list-style-type: none"><li>Sandwich Blocks: (200/300) mmx200mmx400mm</li><li>Slotted Blocks: (200/300) mmx200mmx400mm</li><li>MIB Blocks: 200mmx200mmx400mm</li></ul>
	---Nothing Follows---

Ministry of Works, and Urban Planning  
Municipalities Affairs  
and Urban Planning



**Director Materials Engineering Directorate**



الغانزة على جائزة القائمة العالمية  
للمتميزين في تنفيذ الاستراتيجية





**BUREAU VERITAS**  
Certification



**AL MANARATAIN COMPANY AND ALI AL SHAAB GROUP W.L.L**

**HO: SEHLA ,P.O. BOX 926, MANAMA, KINGDOM OF BAHRAIN**

This is a multi-site certificate, additional site(s) are listed on the next page(s)  
*Bureau Veritas Certification Holding SAS – UK Branch certifies that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below*

## ISO 9001:2015

*Scope of certification*

**MANUFACTURE AND SUPPLY OF CONCRETE HOLLOW BLOCKS, CONCRETE INSULATION BLOCKS, INTERLOCK PAVING, HYDRAULIC PRESS PRODUCTS (KERB STONE, EDGES, PAVING SLABS), RECONSTITUTED STONE, READY MIX CONCRETE, WASHED SAND AND CRUSHER PRODUCTS. DESIGN, MANUFACTURE, SUPPLY AND INSTALLATION OF PRECAST CONCRETE**

Original cycle start date:	<b>19-AUGUST-2014</b>
Expiry date of previous cycle:	<b>18-AUGUST-2020</b>
Recertification Audit date:	<b>13-JULY-2020</b>
Recertification cycle start date:	<b>09-SEPTEMBER-2020</b>

Subject to the continued satisfactory operation of the organization's Management System, this certificate expires on: **18-AUGUST-2023**

**Certificate No. MER20.712/UQ**

**Version 01 Revision date: 09-SEPTEMBER-2020**

Certification body address: **5<sup>th</sup> Floor, 66 Prescott Street, London E1 8HG, United Kingdom**  
Local office: **Bureau Veritas Bahrain Flat No. 11, Building No. 574, Road 1111, Tubli 711, Kingdom of Bahrain.**



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Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organisation. To check this certificate validity please call: **+973 17877574**