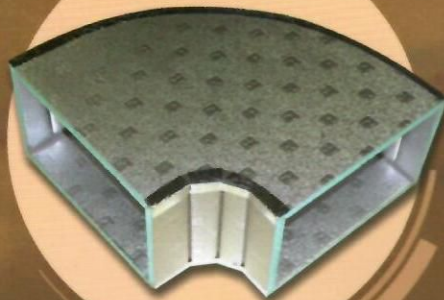
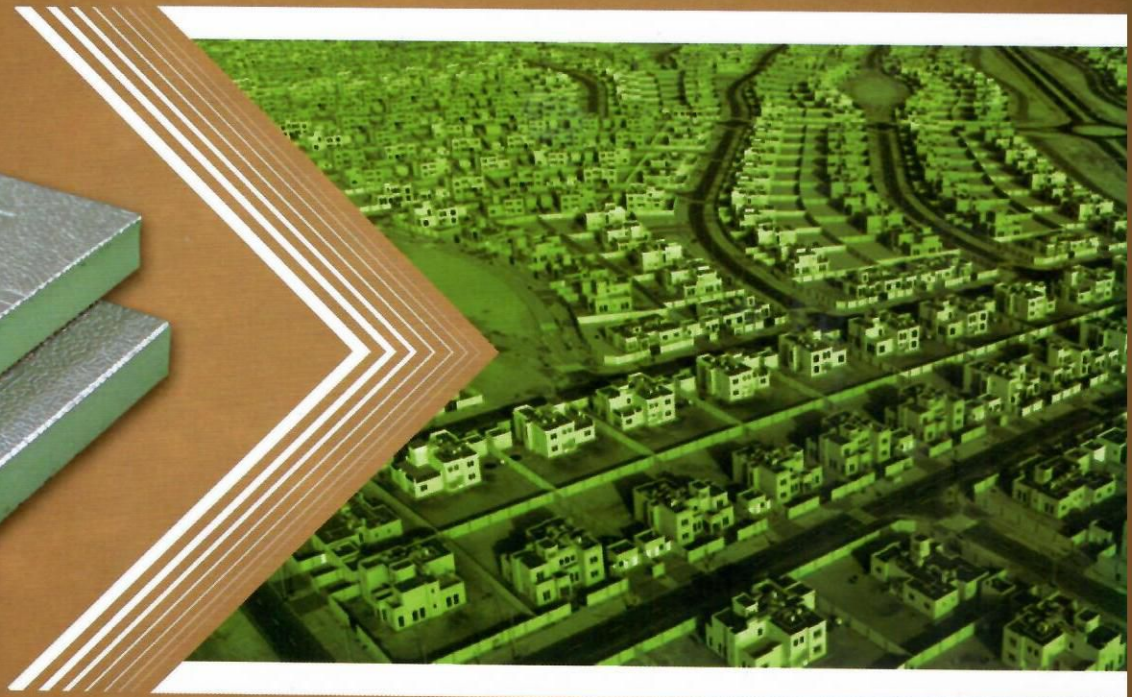
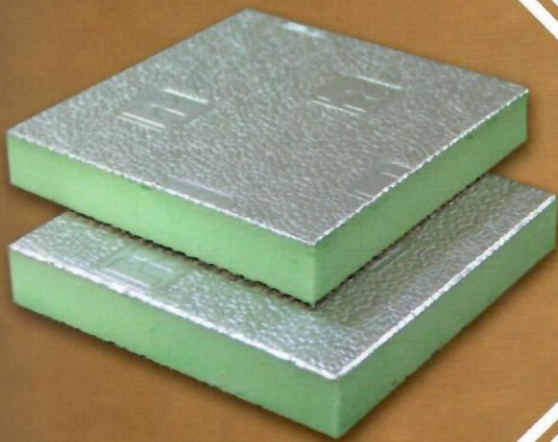




# PEARL INDUSTRIES L.L.C.

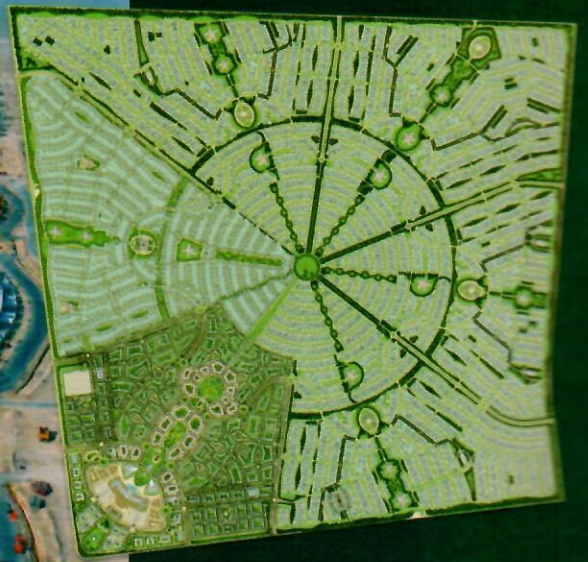




HI-TECH PI DUCTING SOLUTION



اللؤلؤة للصناعات  
Pearl Industries





# Introduction

PEARL INDUSTRIES L.L.C., is a leading manufacturing and trading Group operating in the Emirate of Sharjah. As a company having diversified activities in construction and building materials our major construction to Air conditioning industry is the introduction of Pre insulated Duct Panels. With distributionship since the year 2001 for Pre Insulated Duct Panel, by the year 2004 we established our own manufacturing unit with trade mark **PI** pre Insulated Panels which is already approved by the major Construction in the Industry all over G.C.C.

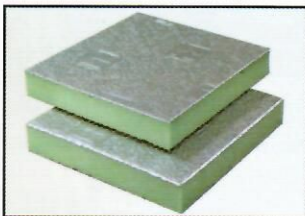


اللوثة للصناعات  
Pearl Industries



**PI** is the panel of pure embossed aluminium pre-insulated with a Polyisocyanurate (PIR) from / PU foam and used in the construction of ducting for air distribution in ventilation, heating and air - conditioning systems (HVAC). due to the combination of aluminium and excellent insulation **PI** Panels can achieve high quality ducts.

This combination also provides an external air quality (EAQ), fine external finish, long life material, lightweight and is easily transported, manipulated and constructed. Ducting systems constructed with **PI** pre-insulated panels can be insulated either in the interior or on the exterior of a building, visible or with a false ceiling in residential and commercial use. **PI** Pre-insulated panels are an excellent option in industry sectors such as food processing, electronic, pharmaceuticals, hospitals & medical centers etc. where there is a need for provision of high level of air quality and hygiene.



Polyisocyanurate (PIR) foam panel / PU foam panels, coated with pure embossed aluminium foil.

There are three types of panels :

- 20/45 - 48 : 20mm thickness
- 30/45 - 48 : 30mm thickness
- 20/62 - 65 : 20mm thickness

For construction of air ducting in heating, ventilation and air-conditioning systems (HVAC)

## PANELS CHARACTERISTIC

		Dimensions	Panel Thickness	Foam Density	Aluminium Foil Thickness	Aluminium Type
	20/45 30/45	4000/1200 mm	20/30 mm	45 kg/m <sup>3</sup> ± 3	80/80 microns	Embossed
	20/45 30/45	4000/1200 mm	20/30 mm	45 kg/m <sup>3</sup> ± 3	80/200 microns	Embossed
	20/62	4000/1200 mm	20 mm	62 kg/m <sup>3</sup> ± 3	80/80 microns	Embossed
	GREEN	4000/1200 mm	20 mm	45 kg/m <sup>3</sup> ± 3	80/80 microns	Embossed
	PLAIN	4000/1200 mm	20 mm	45 kg/m <sup>3</sup> ± 3	80/80 microns	Plain/Embossed





# Welcome To Pearl Industries LLC

Be sure that you will find a better solution in the field of:

- \* Air Quality and HVAC industry - **PI** brand of pure Industrial Panels & Ducts
- \* Water Heaters
- \* Refuse Containers
- \* Garbage Chute Systems
- \* Insulation Material



## Who are we?

Pearl Industries L.L.C. is a leading manufacturing and trading group operating in the emirate of Sharjah. The Company has diversified activities in construction and building materials. Our management is a team of professional personnel headed by Mr. Ahmed Hindawi who has a vast experience and expertise of over 20 years in this field.

## Why US ?

Pearl Industries was the first ones to have been approved by DCL, also certified factory by Warrington. Pearl Industries L.L.C. has its manufacturing plant with state of the art machines to manufacture world class quality products. The factory has the capacity and flexibility to produce range of products. A team of highly skilled labour force is the back bone of our company.

(It is not just our professionalism that you can count on, you will be at ease knowing that you can trust us, our products and its quality).



## Our Products

Pearl Industries L.L.C. and Delta Water Heater Factory L.L.C. are a group of companies operating in the UAE in Sharjah. Managed by a professional team, we have carved a niche for ourselves by being one of the leading producers of Pre Insulated Panels and Ducts, Water heater, Garbage chute systems including refuse containers and insulating materials for MEP products.

Our Major contribution to the Air Conditioning Industry is the introduction of PI brand of pre insulated panels. Pre insulated panels are approved by all major consultants & contractors in the industry all over the GCC.





## General Characteristics

Rigid foamed panel, sandwiched with centesimal aluminium on both sides, suitable for the construction of ducts systems in the air distribution, ventilation, heating and air conditioning systems (HVAC)

## Dimensions

STANDARD production thickness is 20 mm within  $\pm 1$  mm (acceptable tolerance range in accordance with regulation (EN-823)

STANDARD panel length is 4 Mtr. Within  $\pm 3$  mm (acceptable tolerance range in accordance with regulation ISO EN-822)

STANDARD panel width is 1.2 Mtr.  $\pm 3$  mm (acceptable tolerance range in accordance with regulation ISO EN-822)

Squareness of panel is precise to within  $\pm 2$  (acceptable tolerance range in accordance with regulation ISO EN-824) .

On request it is possible to supply panels of other lengths & widths while maintaining the same tolerance as described above.

## Chemical and physical characteristics

Insulating material: the rigid foamed panel is the result of a chemical reaction between specifically formulated, first quality polyols and isocyanates.

The polymer obtained from the specific reaction (which involves the transition from liquid to the solid state) is physically and chemically inert, insoluble and unable to metabolize.

The density of the panels foamed is  $45 \text{ kg/m}^3$  with a tolerance of  $\pm 3 \text{ kg/m}^3$ , This give us the best thermal conductivity. The panels made up of centesimal Aluminium of a thickness of  $80 \mu\text{m}$  on both sides of the panel. The aluminium is painted on the outer surface with protective lacquer for external use of panels.

## Mechanical characteristics

The compression strength is 205 Kpa (acceptable tolerance range in accordance with regulation ISO EN-826.

## Specific heat conductivity

Thanks to high number of closed cells (exceeding 95%) the panel has a coefficient of specific heat conductance in compliance with UNE 92.202 standard of  $0.020 \text{ W/m.k}$

## Smoke opacity

The panel was tested and meet class VOF4=4.1 (accordance with regulation NF-X10.702).

## Rigidity

The elastic rigidity of the panel is of  $258.000 \text{ N.mm}^2$ . classified as CLASS 3 (accordance with regulation pr CEN/TC 156/WG3N207/4<sup>a</sup>.6.1)

## Water absorption

In compliance with ASTM D 2127 standard, after 24 hours of immersion in water the panel had increased in weight by less than 0.5% in volume.

## Water permeability

The aluminium with thickness  $> 50 \mu\text{m}$  is considered as barrier of vapor.

## Utilization Temperature

The panel can be used constantly in a temperature range between  $-40^\circ\text{C}$  to  $+120^\circ\text{C}$  without any substantial differences in the thermo-ventilating insulating specifications. Coefficient of linear thermal expansion is:  $40 \times 10^{-6} \text{ m}$ .







## General Characteristics

Rigid foamed panel, sandwiched with centesimal aluminium on both sides, suitable for the construction of ducts systems in the air distribution, ventilation, heating and air conditioning systems (HVAC)

## Dimensions

STANDARD production thickness is 30 mm within  $\pm 1$  mm (acceptable tolerance range in accordance with regulation (EN-823)

STANDARD panel length is 4 Mtr. Within  $\pm 3$  mm (acceptable tolerance range in accordance with regulation ISO EN-822)

STANDARD panel width is 1.2 Mtr.  $\pm 3$  mm (acceptable tolerance range in accordance with regulation ISO EN-822)

Squareness of panel is precise to within  $\pm 2$  (acceptable tolerance range in accordance with regulation ISO EN-824) .

On request it is possible to supply panels of other lengths & widths while maintaining the same tolerance as described above.

## Chemical and physical characteristics

Insulating material: the rigid foamed panel is the result of a chemical reaction between specifically formulated, first quality polyols and isocyanates.

The polymer obtained from the specific reaction (which involves the transition from liquid to the solid state) is physically and chemically inert, insoluble and unable to metabolize.

The density of the panels foamed is  $45 \text{ kg/m}^3$  with a tolerance of  $\pm 3 \text{ kg/m}^3$ , This give us the best thermal conductivity. The panels made up of centesimal Aluminium of a thickness of  $80 \mu\text{m}$  on both sides of the panel. The aluminium is painted on the outer surface with protective lacquer for external use of panels.

## Mechanical characteristics

The compression strength is 205 Kpa (acceptable tolerance range in accordance with regulation ISO EN-826.

## Specific heat conductivity

Thanks to high number of closed cells (exceeding 95%) the panel has a coefficient of specific heat conductance in compliance with UNE 92.202 standard of  $0.020 \text{ W/m.k}$

## Smoke opacity

The panel was tested and meet class VOF4=4.1 (accordance with regulation NF-X10.702).

## Rigidity

The elastic rigidity of the panel is of  $570.000 \text{ N.mm}^2$ . classified as CLASS 3 (accordance with regulation pr CEN/TC 156/WG3N207/4<sup>a</sup>.6.1)

## Water absorption

In compliance with ASTM D 2127 standard, after 24 hours of immersion in water the panel had increased in weight by less than 0.5% in volume.

## Water permeability

The aluminium with thickness  $> 50 \mu\text{m}$  is considered as barrier of vapor.

## Utilization temperature

The panel can be used constantly in a temperature range between  $-40^\circ\text{C}$  to  $+120^\circ\text{C}$  without any substantial differences in the thermo-ventilating insulating specifications. Coefficient of linear thermal expansion is:  $40 \times 10^{-6} \text{ m}$ .







## General Characteristics

Rigid foamed panel, sandwiched with centesimal aluminium on both sides, suitable for the construction of ducts systems in the air distribution, ventilation, heating and air conditioning systems (HVAC)

## Dimensions

STANDARD production thickness is 20 mm within  $\pm 1$  mm (acceptable tolerance range in accordance with regulation (EN-823))

STANDARD panel length is 4 Mtr. Within  $\pm 3$  mm (acceptable tolerance range in accordance with regulation ISO EN-822)

STANDARD panel width is 1.2 Mtr.  $\pm 3$  mm (acceptable tolerance range in accordance with regulation ISO EN-822)

Squareness of panel is precise to within  $\pm 2$  (acceptable tolerance range in accordance with regulation ISO EN-824) .

On request it is possible to supply panels of other lengths & widths while maintaining the same tolerance as described above.

## Chemical and physical characteristics

Insulating material: the rigid foamed panel is the result of a chemical reaction between specifically formulated first quality polyols and isocyanurate and instead of 141B blowing agent, a water based blowing agent is used and therefore giving out GWP=0 and ODP=0.

GWP (Global Warming Potential) This expresses the extent of gas contributes to the green house effect, based on a relative scale comparing gas considered with an equal mass of CO<sub>2</sub>.

ODP ( Ozone Depletion Potential) The destructive effect of a fluid with regards to the ozone layer in the stratosphere. It is expressed taking gas for which the value of ODP=1.

## Mechanical characteristics

The compression strength is 205 Kpa (acceptable tolerance range in accordance with regulation ISO EN-826.

## Specific heat conductivity

Thanks to high number of closed cells (exceeding 95%) the panel has a coefficient of specific heat conductance in compliance with UNE 92.202 standard of 0.020 W/m.k

## Smoke opacity

The panel was tested and meet class VOF4=4.1 (accordance with regulation NF-X10.702).

## Rigidity

The elastic rigidity of the panel is of 570.000 N.mm<sup>2</sup>. classified as CLASS 3 (accordance with regulation pr CEN/TC 156/WG3N207/4<sup>a</sup>.6.1)

## Water absorption

In compliance with ASTM D 2127 standard, after 24 hours of immersion in water the panel had increased in weight by less than 0.5% in volume.

## Water permeability

The aluminium with thickness  $> 50 \mu\text{m}$  is considered as barrier of vapor.

## Utilization Temperature

The panel can be used constantly in a temperature range between  $-40^{\circ}\text{C}$  to  $+120^{\circ}\text{C}$  without any substantial differences in the thermo-ventilating insulating specifications. Coefficient of linear thermal expansion is:  $40 \times 10^{-6} \text{ m}$ .







## Description

Anti Bacterial sandwich panel made of a rigid polyurethane insulation foam, faced on one side with a smooth aluminium with lotus effect self-cleaning and antimicrobial treatment and on the other side with embossed aluminium, both 80 micron thick.

## Uses

This panel is suitable for the construction of air-distribution ducts in air-conditioning and heating system with particular hygiene requirements. The panel comes with a special liquid glass nano-structured coating which is applied on the surface in contact with the air flow and capable of allowing the easy removal of solid particles deposited on the internal surface of the duct, guaranteeing at the same time the antimicrobial efficacy. The panel is capable of simplifying, consequently, the normal maintenance and cleaning operations of the ducts as prescribed in the " Guidelines for the definition of the technical protocols in air condition system maintenance and cleaning" published in the Ministry of Health Official Gazette on the 3rd of November 2006 and by the UNI EN 15780 Ventilation for building - Duct work - Cleanliness of Ventilation System

## Dimensions And Tolerances

STANDARD production thickness is 20 mm within  $\pm 1$  mm (acceptable tolerance range in accordance with regulation (EN-823)

STANDARD panel length is 4 Mtr. Within  $\pm 3$  mm (acceptable tolerance range in accordance with regulation ISO EN-822)

STANDARD panel width is 1.2 Mtr.  $\pm 3$  mm (acceptable tolerance range in accordance with regulation ISO EN-822)

Squareness of panel is precise to within  $\pm 2$  (acceptable tolerance range in accordance with regulation ISO EN-824).

On request it is possible to supply panels of other lengths & widths while maintaining the same tolerance as described above.

## Thermal Conductivity

Thanks to high number of closed cells (exceeding 95%) the panel has a coefficient of specific heat conductance in compliance with UNE 92.202 standard of 0.020 W/m.k

## Facing Characteristics

The insulating material is faced externally by 80 $\mu$ m thick embossed aluminium and internally by 80 $\mu$ m smooth aluminium

## PANEL CHARACTERISTICS

### Utilization temperature

The panel can be used constantly in a temperature range between  $-40^{\circ}$  to  $+120^{\circ}\text{C}$  without any substantial differences in the thermo-ventilating insulating specifications. Coefficient of linear thermal expansion is:  $40 \times 10^{-6}$  m.

### Rigidity class

The rigidity class of the panel is 200.000 Nmm<sup>2</sup>/mm corresponding to the R4 class according to UNN EN 13403. Therefore, ducts

made with this panel might request the appropriate reinforcements according to the following table:





## Aesthetics

Both surfaces of the panel are completely flat (UNI EN 825). Evident flaws shall not affect more than 10% of the global surface (as per 1Lt\_012 standard)

The little bubbles of different dimensions, under the aluminium sheet covering the panels, generated during the continuous production process do not jeopardize the material's physical-mechanical characteristics.

## Smoke opacity

The panel was tested and meet class VOF4=4.1 (accordance with regulation NF-X10.702).

## Water absorption

In compliance with ASTM D 2127 standard, after 24 hours of immersion in water the panel had increased in weight by less than 0.5% in volume.

## Water permeability

The aluminium with thickness  $>50 \mu\text{m}$  is considered as barrier of vapor.

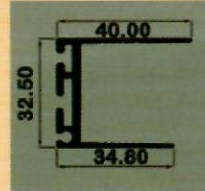
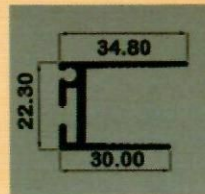






## Aluminium Invisible Profile PVC Invisible Profile

Length: 4mt / 5.8 mtr  
Thickness : 20mm, 30mm



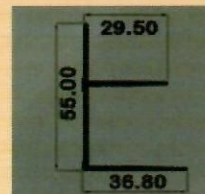
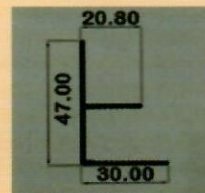
## PVC Sliding Channel H bayonet

Length: 4mt



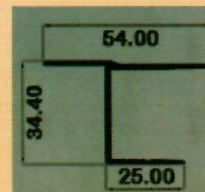
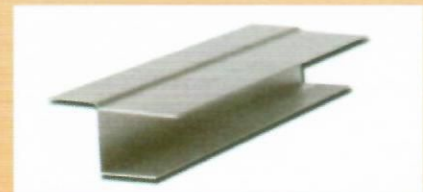
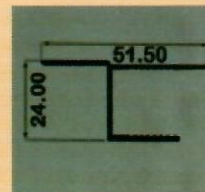
## Aluminium F Profile

Length: 4mt / 5.8 mtr  
Thickness : 20mm, 30mm



## Aluminium h Profile

Length: 4mt / 5.8 mtr  
Thickness : 20mm, 30mm

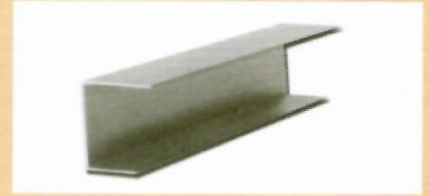
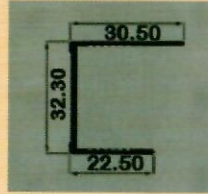
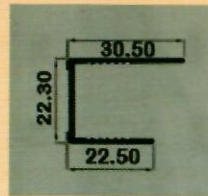






## Aluminium U Profile

Length: 4mt / 5.8 mtr  
Thickness : 20mm, 30mm



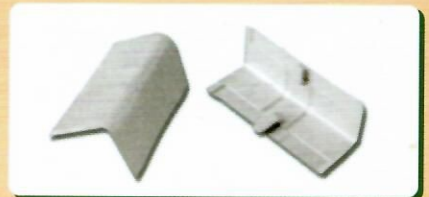
## GI Corner

Thickness : 20mm



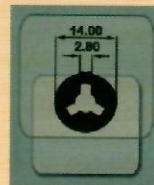
## PVC Cover PVC Corner

Thickness: 20mm  
Thickness : 20mm



## Reinforcement Aluminium Bar

Length: 4mt / 5.8 Mtr  
Thickness: 14mm



## Reinforcement Disc







Tool Box

Left & Right Cutter, Straight Cutter, V Cutter



Duct Glue 15 Ltr.



Profile Glue



Cutting Table



Straight Cutting Machine



Silicone Sealant



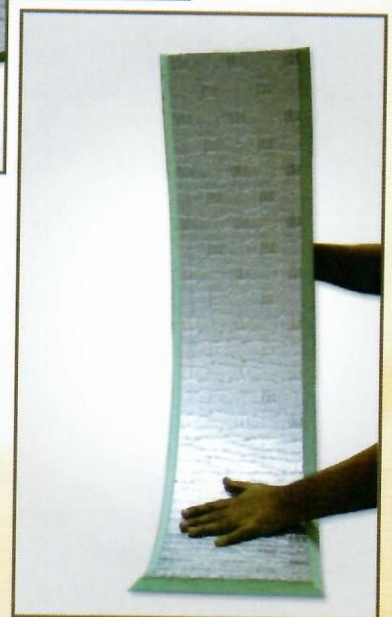
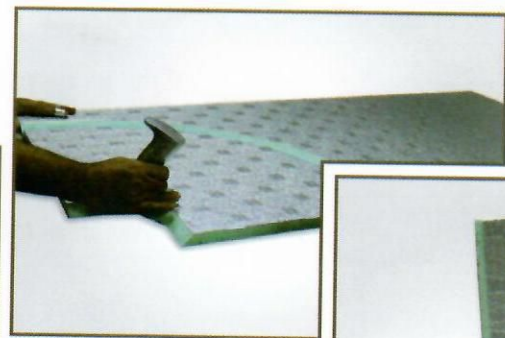
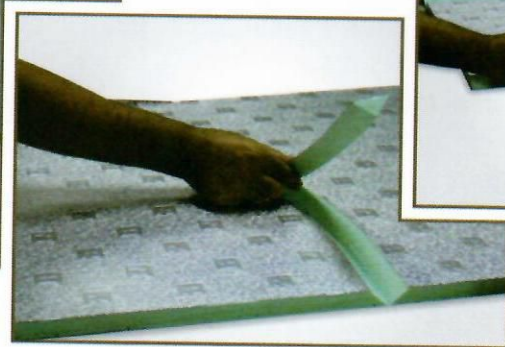
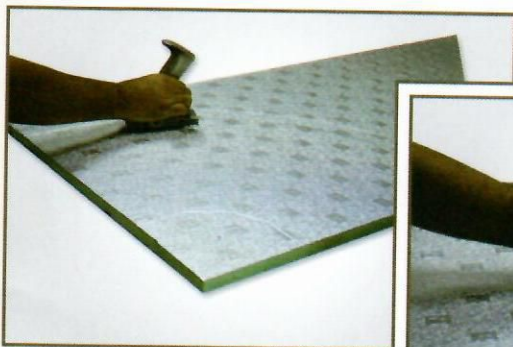
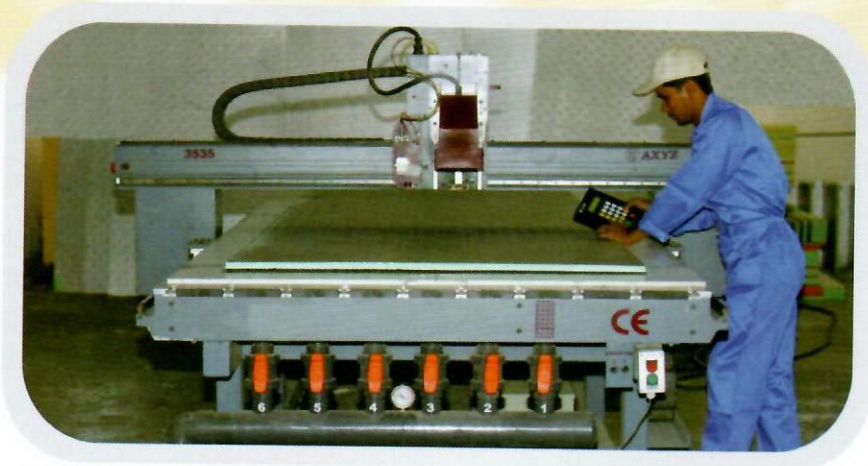
Tiger Joint



Aluminium Tape











S. No.	Description / Characteristics	Galvanized insulated ductwork	Pre-insulated sandwichpanels Ductwork
1	Production process	Uses CFCs	Totally CFC - free: Environmentally friendly
2	Hygiene/health hazard		
	→ Fabrication	Fiberglass dispersion while cutting causes asthma-like ailments.	No such dispersion, as the material does not disintegrate while cutting
	→ Service	In a warm & humid environment, laging adhesives used in insulation work give rise to eventual growth of fungus, bacteria, (Typical black spots)	Meet the requirement of IAQ (indoor air quality), especially important in clean room applications such as hospitals, laboratories, food processing etc.
3	Quality Control		
	→ Manufacturing Stage	Numerous vendors (At least 5 different processes involved)	Single point quality assessment ISO 9002
	→ On-site /storage	Continuous supervision required in ensuring conformity material specifications, work method, workmanship. Adhesives used have much smaller shelf life	Minimum supervision only.
4	Light - Weight	Heavy on structure	Light - Weight (15 - 20% of GI Ductworks)
5	Heat Transfer	"U" = 0.033 W/m.k (With 25mm thick insulation)	"U" < 0.020 W/m.k (20mm panels) due to reduced losses, energy savings over G.I Ductwork. Supports energy conservation programme/ environmental protection.
6	Air seal	Three different grades of construction for low, medium, and high-pressure class.	Universally suitable up to 1500 pascal's +ve or -ve pressure
7	Fire Properties / homologation	Class "O", BS 476, PART 6 & 7	Class "O", BS 476, PART 6 & 7 Tested and approved. Certified by Warrington UL 723 Class A, ASTM E84 Class A.






S. No.	Description / Characteristics	Galvanized insulated ductwork	Pre-insulated sandwichpanels Ductwork
8	Permeability, Solubility	Fiberglass absorbs water, loses thermal properties. Damp areas are susceptible to mildew fungal growth.	Closed cell content is very high; water immersion test was conducted. Whereas aluminium facing laminate, if damaged can be repaired and the chances of vapour condensation and water drip off are practically non-existent; there by the risk factor for consequential damages to ceilings/ finishes is eliminated.
9	Longevity / ageing`	Galvanization begins to oxidize / deteriorate over period of time, especially when the installation is external exposed to weather.	Prolonged life due to use of aluminium laminate, coated with 2gm /m <sup>2</sup> of special anti-rust lacquer on both sides (all Panels) In addition, dedicated panel for highly corrosive environment is available. This panel has additional polyester film on aluminium laminate.
10	Cleaning	Feasible with use of appropriate solvents, mechanical brushes.	Feasible with use of recommended solvents, brushes. Guidelines are outlined in the application handbook.
11	Productivity	Low: very high fatigue. especially in summer. Bigger work force / deployment. Extended time frame / completion	High; very low fatigue. Smaller work force / deployment. Faster completion, can easily compensate for initial delays.
12	Logistics	Added transportation to site, site storage facilities / space consuming. Extensive handling / requirement of sevice lift, hoists and heavy scaffoldings etc..	Site fabricated and installed Minimum storage area. Lightweight handling equipment. Panels and accessories are moved and fabricated into ducts at the actual work place itself (such as various floors of multi-story building).
13	Administrative	Large workforce requiring added accomodation, sanitation, transport, Government departmental costs, naturalization, gratuity, travel costs added supervisory staff.	Much smaller work force, less supervision and efficient / competitive management single point procurement efficient material controls.




**20 mm PANEL (INTERNAL USE)**

To produce 1,000m<sup>2</sup> of  Pre insulated Ducting System, the following is a list of material and accessories for a standard construction requirement:

Sr. No.	DESCRIPTION	UOM	APPROX. QTY
1	Panel 4000 x1200mm	m2	1000
2	Aluminium Invisible Profile	mtrs	960
3	H Bayonet in Polymer	mtrs	480
4	PVC cover in Polymer	nos	1760
5	GI Corner Plate	nos	3000
6	Aluminium U Profile	mtrs	110
7	Aluminium Chair Profile	mtrs	108
8	Aluminium F Profile	mtrs	100
9	Duct Adhesive (1 drum = 15 ltrs)	drum	9
10	Aluminium Tape (1 box x 24 rolls)	box	11
11	Silicon Sealant (1 box x 24 tubes)	box	11
12	Profile Glue	nos	17

**30 mm PANEL (EXTERNAL USE)**


To produce 1,000m<sup>2</sup> of  Pre insulated Ducting System, the following is a list of material and accessories for a standard construction requirement:

Sr. No.	DESCRIPTION	UOM	APPROX. QTY
1	Panel 4000 x1200mm	m2	1000
2	Aluminium Joint Profile	mtrs	760
3	Aluminium Channel	mtrs	400
4	GI Corner Plate	nos	1,500
5	PVC cover in Polymer	nos	1,500
6	Profile Glue	nos	17
7	Aluminium U Profile	mtrs	80
8	Aluminium Chair Profile	mtrs	80
9	Aluminium F Profile	mtrs	80
10	Duct Adhesive (1 drum = 15 ltrs)	drum	9
11	Aluminium Tape (1 box x 24 rolls)	box	11
12	Silicon Sealant (1 box x 24 tubes)	box	11
13	Reinforcement Bar in Aluminium	mtrs	120
14	Reinforcement Disc	nos	200



# CERTIFICATES





**CERTIFICATE OF APPROVAL**  
No CF 5270

This is to certify that, in accordance with  
TS09 General Requirements for Certification of Fire Protection Products  
The undermentioned products of

**PEARL INDUSTRIES LLC**  
P.O. Box 31710, Sharjah, U.A.E.

Have been assessed against the requirements of the Technical Schedule(s)  
denoted below and are approved for use subject to the conditions  
appended hereto:


---

**CERTIFIED PRODUCT**                      **TECHNICAL SCHEDULE**


**ALU-FACED PIR FOAM**                      **TS19 Class 0 / Class 1 (BS)**

See annex 1 for further product information

Signed and sealed for and on behalf of CERTIFIRE



Sir Ken Knight                      Issued: 22<sup>nd</sup> July 2014  
Chairman - Management Council      Valid to: 22<sup>nd</sup> July 2019  
Page 1 of 5





**CERTIFICATE No CF 5270**  
**PEARL INDUSTRIES LLC**


**Annex 1**

The description of the specimens given below has been prepared from information provided by the sponsor of the test. All values quoted are nominal, unless tolerances are given.

<b>General description</b>	A polyisocyanurate (PIR) foam faced on both sides with an aluminium foil facing
<b>Product reference of overall composite</b>	No specific product reference
<b>Name of manufacturer of overall composite</b>	Pearl Industries LLC
<b>Thickness of overall composite</b>	20 mm (or more)
<b>Product configuration</b>	<ul style="list-style-type: none"> <li>Aluminium foil</li> <li>Foam</li> <li>Aluminium foil</li> </ul>
<b>Generic type</b>	Embossed aluminium foil
<b>Product reference</b>	"Pre Coated Aluminium Foil"
<b>Name of manufacturer</b>	See Note 1 below
<b>Aluminium foil</b>	<ul style="list-style-type: none"> <li>Thickness: 80 microns</li> <li>Density: 2700 kg/m<sup>3</sup></li> <li>Weight per unit area: 0.216 kg/m<sup>2</sup></li> <li>Colour reference: "Silver"</li> </ul>
<b>Bonding details</b>	Auto-adhesively bonded to core during foaming process
<b>Generic type</b>	A polyisocyanurate (PIR) foam
<b>Product reference</b>	"PI PIR / PU Fire Insulated Panels"
<b>Detailed composition details</b>	See Note 1 below
<b>Name of manufacturer</b>	Pearl Industries LLC
<b>Thickness</b>	20 mm (or more)
<b>Density</b>	42 - 43 kg/m <sup>3</sup>
<b>Colour reference</b>	"Green"
<b>Flame retardant details</b>	See Note 1 below
<b>Brief description of manufacturing process</b>	See Note 1 below

**Note 1 - The sponsor was unwilling to provide this information.**

Page 5 of 5 Signed  Issued: 22<sup>nd</sup> July 2014  
Valid to: 22<sup>nd</sup> July 2019



**WIMPEY LABORATORIES** مختبرات ويمبي

**LABORATORY REPORT**

Pearl Industry                      Report No: WLR16-8173 Rev-1  
Sharjah                                  Sample No: WS16-6173  
UAE                                        Report Date: 18/08/2016

**Introduction:** Further to the request received from Ms. Pearl Industry dated 10<sup>th</sup> August 2016, a sample of PI Phenolic Panel was tested for below mentioned toxic chemical parameters.

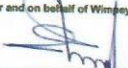
**Sample Description** : PI Phenolic Panel  
**Sample Date Received** : 18/08/2016  
**Test Date** : 10/06/2016 - 14/08/2016  
**Tested by** : VM

**Toxic Chemical Analysis**

Test	Method	Unit	Result
Formaldehyde	ENV 717 (Class E1)	mg/kg	<0.1
		mg/m <sup>3</sup>	<0.01
<b>Heavy Metals</b>			
Lead	ICP-OES	ppm	<0.01
Cadmium		ppm	<0.01
Mercury		ppm	<0.01
Arsenic		ppm	<0.01
Chromium		ppm	<0.01
Tin		ppm	<0.01
Asbestos content	USEPA 600/R-93/116	-	No known species of asbestos minerals are present.

**Remarks:** The release of formaldehyde is Class E1

Signed for and on behalf of Wimpey Laboratories

  
Dr. Sudhanandh V.S., M. Phil, PhD  
Laboratory Manager  
Test results relate only to the samples tested.  
This report shall not be reproduced except in full, without the written approval of the laboratory.  
- End of test -

تاريخ الطباعة: 2016-10-24  
وقت الطباعة: AM 11:23  
رقم الطلب: PAC18013188

شهادة عدم ممانعة

نوع الشهادة: اعتماد منتج  
بيانات المنشأة: شركة فراز للتبريد وتكييف الهواء  
الاسم التجاري: 18958  
رقم الدليل التجاري: 10-9686-00  
رقم قيد المنشأة: 2069  
البريد الإلكتروني: رقم الهاتف:

التصنيف: Fire Rated and Retardant materials  
إسم المنتج: Insulation Materials (Rockwool, Thermal insulators etc)  
تفاصيل الشهادة: تم مراجعة الطلب المقدم والتضح بأنه لا مانع من اعتماد المنتج للمنتجات الموضحة في التقرير الفني المرفق بناء على اعتماد من قبل اللجنة المختصة للموضحة في التقرير الفني المرفق.

ملاحظات:  
- يجب على الشركة الالتزام بالعمل بما جاء في الشهادات عدم الممانعة التي تم الإطلاع والموافقة عليها من خلال الموقع.  
- يجب ان يتم تركيب هذا المنتج من قبل مهنيين وفنيين معتمدين من الإدارة العامة للدفاع المدني.  
- يجب ان يعمل المنتج الممانعة للتجارة لتبويه المعتمدة والمعتمدة والموضحة في التقرير الفني المرفق.

تاريخ الإصدار: 2016-10-24      تاريخ الانتهاء: 2018-10-24

مدير الإدارة العامة للدفاع المدني  
الإدارة العامة للدفاع المدني







## Certificates

United Arab Emirates Ministry of Interior General Directorate of Civil Defense General Department of Civil Defense - Abu Dhabi				دولة الامارات العربية المتحدة وزارة الداخلية القيادة العامة للدفاع المدني الإدارة العامة للدفاع المدني - أبوظبي	
<b>ترخيص مصنع</b>					
تم إصدار الترخيص استناداً إلى القرار الوزاري رقم (24) لسنة 2012، في شأن تنظيم خدمات الدفاع المدني					
2014-3-92922	رقم المسجل	523466	رقم الرخصة	النؤولة للصناعات د.م.	الاسم التجاري للمنشأة
		الأردن	الجنسية	أحمد حسين فخرى الهناوى	اسم صاحب الترخيص
		الإمارات العربية المتحدة	الجنسية	محمد إسماعيل حسن صالح	اسم صاحب الترخيص
		الإمارات العربية المتحدة	الجنسية	أنور عبدالرحيم محمد صالح عنى خان	اسم صاحب الترخيص
الشارقة	منطقة النشاط		رقم الفاكس	صناعة مجاري الهواء - المانعة للحريق	نوع النشاط
26282	ص ب		0501744431	أرض مسورة ملك أحمد حسين فخرى الهناوى - خلف شارع الملبحة - الصناعية 15. الشارقة	رقم الهاتف
					عنوان الشركة
02/04/2018	تاريخ الانتهاء	11/10/2017	تاريخ الإصدار	27/06/2004	الموقع و البريد الإلكتروني
					تاريخ تأسيس المنشأة
					عدد المعدات والأجهزة المراد ترخيصها 1
					عدد المهنيين المعتمدين 2
					عدد الفنيين المعتمدين 6

<https://es.adcd.gov.ae/index/certificate-inquiry> تعتبر هذه الشهادة وثيقة رسمية لا تحتاج إلى توقيع. للتأكد من صحة المعلومات يرجى زيارة الرابط التالي:

1 / 2

حكومة دبي GOVERNMENT OF DUBAI		بلدية دبي DUBAI MUNICIPALITY	
<b>CERTIFICATE OF PRODUCT CONFORMITY</b>			
Dubai Central Laboratory Department (DCLD) of Dubai Municipality, hereby attests that the product(s):			
<b>FACTORY MADE RIGID POLYURETHANE FOAM</b> (Details as per the attached Scope of Certification)			
manufactured by:			
<b>PEARL INDUSTRIES L.L.C.</b> P.O. Box 31710, Sharjah Industrial Area 15, Sharjah, UAE			
have been assessed in accordance with DCLD Document Ref. No. RD-DP21-2001 (IC) "General Rules for DM third party product certification system through factory assessment" and the relevant Specific Rules, and were found in conformity with the standard specification:			
<b>BS EN 13165:2012</b>			
Accordingly, DCLD hereby authorizes the above manufacturer to affix the DCL Product Conformity Mark to the above-mentioned product(s).			
 ENGR. AMIN AHMED AMIN Director, Dubai Central Laboratory Department Dubai Municipality			
Certificate No: CL16020355 Valid Until: 13 April 2018		Current Issue Date: 14 April 2017 Original Issue Date: 14 April 2016	
The attached Scope of Certification bearing the same Certificate No. forms an integral part of this certificate. This certificate is subject to the Terms and Conditions of the Product Certification System and shall not be reproduced except in full.			
		F4C-2031 R8	





# CERTIFICATES



**Intertek**

Test Report

Number: SHAH0053265101

Applicant: Chongqing Sourceland Aluminium Industry Co., Ltd.  
Crystal International Mansion, 226th, Zhongshan 1st Road,  
Yuzhong Dist. Chongqing, China Date: 15 Feb, 2015

Sample Description:  
Sample Name : ANTI-BACTERIAL LACQUERED ALUMINIUM FOIL  
Model : A  
Test Purpose : Entrust Test

Tests Conducted:  
As requested by the applicant, for details refer to attached page(s).

To be continued

Authorized By:  
For Intertek Testing Services  
Ltd., Shanghai

*Cheng Jun*

Cheng Jun  
General Manager



Intertek Testing Services Ltd., Shanghai  
6F, No. 2 Building, Shanghai Combridge Industrial Park No. 588 Yixian Road, Shanghai, 200233, China.  
上海天祥质量技术服务有限公司  
中国上海宝山区淞南镇江湾路1号5楼8号 邮编: 200233  
Telephone: +86 21 6120 0899 Facsimile: +86 21 6495 4550  
www.intertek.com www.intertek.com.cn

Page 1 of 3

**Intertek**

Test Report

Number: SHAH0053265101

Tests Conducted

**1 Anti-Bacterial Activity Test**

JIS Z 2801:2010 -Antimicrobial products-Test for antimicrobial activity and efficacy-

Clean the sample with 70% ethanol Before Test.  
Contact Time: 24±1 Hours  
Incubation Temperature: 35±1°C  
Concentration: 2.5-10×10<sup>7</sup> cfu/ml.  
Quantity: 1.0±0.1ml.

Test Culture: Staphylococcus Aureus (ATCC 6538)  
Escherichia coli (ATCC 8739)

No. Of Test Specimen : 1 Piece/50×50mm square

Test Result (A) :

Test organism	Concentration of bacteria (cfu/ml.)	The number of bacteria recovered from (cfu/ml.)		Log reduction
		at "0H" contact time	at "24H" contact time	
Staphylococcus aureus ATCC 6538	2.5×10 <sup>7</sup>	Sample	0.6	4.0
		Control Sample	7.5×10 <sup>3</sup>	5.6×10 <sup>3</sup>
Escherichia coli ATCC 8739	4.3×10 <sup>8</sup>	Sample	0.6	4.7
		Control Sample	1.0×10 <sup>4</sup>	3.5×10 <sup>4</sup>

Sample Received Condition: Sample In Closed Plastic Bag (Package).  
Preparation of sample: The submitted sample was washed for / / wash and then subjected to the following test.

Remark:

Log reduction R= (Log (B/A) -Log (C/A) ) ÷Log (B/C)

A: The average number of bacteria, obtained from three test control sample immediately after incubation  
B: The average number of bacteria, obtained from three test control sample after a 24h incubation;  
C: The average number of bacteria, obtained from three test treated sample after a 24h incubation;

The Judgment of antimicrobial activity:  
The Log value of antimicrobial activity must be not less than 2.0.

To be continued

Intertek Testing Services Ltd., Shanghai  
6F, No. 2 Building, Shanghai Combridge Industrial Park No. 588 Yixian Road, Shanghai, 200233, China.  
上海天祥质量技术服务有限公司  
中国上海宝山区淞南镇江湾路1号5楼8号 邮编: 200233  
Telephone: +86 21 6120 0899 Facsimile: +86 21 6495 4550  
www.intertek.com www.intertek.com.cn

Page 2 of 3

## Certificate

Standard **ISO 9001:2008**

Certificate Registr. No. 01 100 1822660/01

Certificate Holder: **Pearl Industries L.L.C.,**  
P.O. Box - 26282,  
Sharjah, United Arab Emirates.

Scope: Manufacturing of Pre-Insulated Panels, Fabrication of Ducts

Proof has been furnished by means of an audit that the requirements of ISO 9001:2008 are met.

Validity: The certificate is valid in conjunction with the main certificate from 2016-06-14 until 2018-09-14.

2016-06-14

*Andreas*

TÜV Rheinland Cert GmbH  
Am Grauen Stein 61155 Köln



www.tuv.com

**TÜVRheinland**  
Precisely Right.

**Intertek**

Test Report

Number: SHAH0053265101

Tests Conducted



Date Sample Received: 09 FEB, 2015  
Testing Period: 09 FEB, 2015 To 15 FEB, 2015

End of report

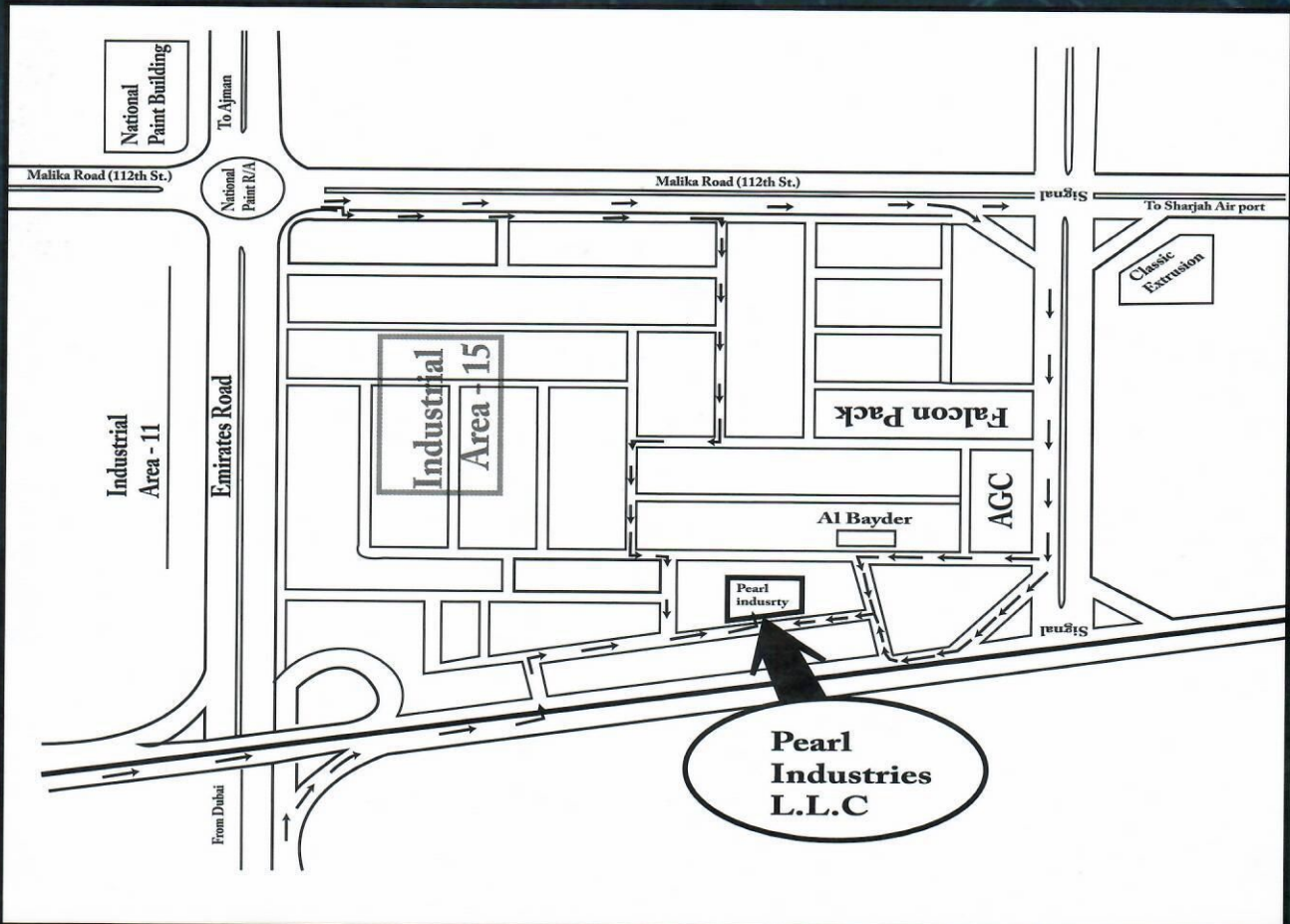
This report is made solely on the basis of your instructions and/or information and materials supplied by you. It is not intended to be a recommendation for any particular course of action. Intertek does not accept a duty of care or any other responsibility to any person other than the Client in respect of this report and only accepts liability to the Client insofar as is expressly embodied in the terms and conditions governing Intertek's provision of service to you. Intertek makes no warranty or representations either express or implied with respect to this report save as provided for in those terms and conditions. We have aimed to provide the Reviewer on a diligent and careful basis and we do not accept any liability to you for any loss arising out of or in connection with this report, in contract, tort, by statute or otherwise, except in the event of our gross negligence or willful misconduct. Without consent of the testing organisation, the client shall not be unauthorised use of test results for impromptu engagements. The testing results are only valid for the sample tested. The testing results are only for the reference of testing research, can not be used as a social justice data.

Intertek Testing Services Ltd., Shanghai  
6F, No. 2 Building, Shanghai Combridge Industrial Park No. 588 Yixian Road, Shanghai, 200233, China.  
上海天祥质量技术服务有限公司  
中国上海宝山区淞南镇江湾路1号5楼8号 邮编: 200233  
Telephone: +86 21 6120 0899 Facsimile: +86 21 6495 4550  
www.intertek.com www.intertek.com.cn

Page 3 of 3







## PEARL INDUSTRIES L.L.C

P.O. Box: 26282 - United Arab Emirates

Tel: +971 6 5343400/5345266, Fax : +971 6 5342422

E-mail: sales@pearl.ae Website: www.pearl.ae