COMPANY PROFILE

CONTACT US

The Curve Building, Office M-61 , M-62
Sheikh Zayed Road
P.O. Box 283935, Dubai, UAE
Tel: +971 4 388 4465
Fax: +971 4 388 4497
Email: info@hubtecdubai.com
Web: www.hubtecdubai.com

HUB TEC BUILDING MATERIALS

"THE BENCH MARK IN QUALITY"

INDEX

INTRODUCTION

Since its inception in 2004 ***Hub Tec Building Materials*** has been a manufacturer and supplier for construction chemicals.

Hub Tec Building Materials is a market-driven company with strategically located facilities throughout the country and a distribution network that reaches around the world.

Hub Tec production system has implemented and maintains the Quality Management System, which fulfils the requirements of the ISO 9001 Standard.
The chemical laboratory, equipped with sophisticated apparatuses allows the accurate daily controls on the raw materials and on the finished products.
The modern production plants succeed in satisfying the demands of increasing customers realizing qualitative standard in line with the normative ECM

Hub Tec Building Materials is building an integrated internal working environment to increase the loyalty of employees of the company, in order to achieve the highest satisfaction rates in the public interest in the context of the continuity of the development of relationships with manufacturers and leading suppliers.

Also, we have manufacturing units for Tiles Glue & Marble since 2004. We are working on formation of a large base of consumers to make ***HUB TEC BUILDING MATERIALS*** one of the companies that have the advantage to the customer, with our commitment to speed and credibility.

MISSION

TO DEVELOP, MANUFACTURE AND MARKET CONSTRUCTION CHEMICAL PRODUCTS, TO THE HIGHEST TECHNICAL STANDARDS FOR PERFORMANCE, SAFETY AND CLEAN ENVIRONMENT WITH FLEXIBILITY AND EFFICIENT SUPPORT PROVIDED BY OUR TECHNICAL AND CUSTOMER SERVICE DEPARTMENTS TO GUARANTEE THE SATISFACTION OF OUR CUSTOMERS

QUALITY POLICY

HUB TEC BUILDING MATERIALS IS COMMITTED TO DELIVERING PRODUCTS AND SERVICES THAT MEET OUR CUSTOMER'S NEEDS AND EXPECTATIONS IN A TIMELY AND COSTS EFFECTIVE MANNER. OUR GOAL IS TO INVOLVE EVERY EMPLOYEE IN THE CONTINUAL IMPROVEMENT OF ALL OF OUR PROCESSES BY CREATING A CHALLENGING. TRUSTING, AND REWARDING WORK ENVIRONMENT, WHICH ENCOURAGES AND SUPPORTS FULL PARTICIPATION IN OUR TOTAL QUALITY EFFORT.

GENERAL MANAGER

حكومة دبي
GOVERNMENT OF DUBAI

اقتصادية دبي
DUBAI ECONOMY

رخصة تجارية
Commercial License

License Details / تفاصيل الرخصة

License No.	547321				رقم الرخصة
Company Name	HUB TEC BUILDING MATERIALS				اسم الشركة
Trade Name	HUB TEC BUILDING MATERIALS				الإسم التجاري
Legal Type	Limited Liability Company(LLC)				الشكل القانوني
Expiry Date	20/07/2022	تاريخ الإنتهاء	Issue Date	21/07/2003	تاريخ الإصدار
D&B D-U-N-S ® **	534445259	الرقم العالمي	Main License No.	547321	رقم الرخصة الام
Register No.	1457868	رقم السجل التجاري	DCCI No.	79486	عضوية الغرفة

License Members / الاطراف

رقم الشخص/No.	الإسم / Name	الجنسية / Nationality	الصفة / Role	الحصص / Share
161771	احمد محمد عبدالرضا حسين الاحمدي AHMED MOHAMMED ABDULREM HUSAIN ALAHMADI	United Arab Emirates / الامارات	Manager / مدير	

تم توقيع إفادة المستفيد الحقيقي لهذه الرخصة بتاريخ 27/06/2021. للمزيد من المعلومات أو لمعرفة المستفيد الحقيقي يرجى التكرم بزيارة مراكز الخدمة أو الخدمات الالكترونية التابعة لدائرة التنمية الاقتصادية.

Beneficiary Owner consent of this license has been signed on 27/06/2021. For more information or to know the Beneficiary Owner please visit any DED service center or DED eServices website.

License Activities / نشاط الرخصة التجارية

Building & Construction Materials Trading

تجارة مواد البناء

Address / العنوان

Phone No	971-4-3884465	تليفون	
Fax No	971-4-3884497	فاكس	
Mobile No	971-55-2020404	هاتف متحرك	
P.O. Box	283935	صندوق بريد	
Parcel ID	358-574	رقم القطعة	

ملك علياء عبدالرحيم احمد عبدالله - برديي - القوز الثالثة M61-M62 مكتب

Email / البريد الإلكتروني

Remarks / الملاحظات

تم تغيير الاسم التجاري من احمد الأحمدي للتجارة وتغيير النشاط والموقع في 2/4/2014

Print Date	15/07/2021	13:22 تاريخ الطباعة	Receipt No.	13988401	رقم الإيصال

الإمارات
THE EMIRATES

يمكنك الآن تجديد رخصتك التجارية من خلال الرسائل النصية القصيرة، أرسل رقم الرخصة إلى 6969 (دو/اتصالات) للحصول على اذن الدفع.
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وثيقة إلكترونية معتمدة وصادرة بدون توقيع من دائرة التنمية الاقتصادية .لمراجعة صحة البيانات الواردة في الرخصة برجاء زيارة الموقع www.dubaided.gov.ae
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ملحق الشركاء
Partners

License Details / تفاصيل الرخصة

رقم الرخصة	547321	License No.	الرقم العالمي	534445259	D&B D-U-N-S ® No.

License Partners / اصحاب الرخصة

Name / الإسم	Nationality / الجنسية	Sr. No./مسلسل الشخص	Share / الحصص
Amaco Investments Group L L C / مجموعة اماكو للاستثمارات ش ذ م م	United Arab Emirates / الامارات	794197	65.0000000%
Ahmed Mohammed Abdulrem Husain Alahmadi / احمد محمد عبدالرضا حسين الاحمدي	United Arab Emirates / الامارات	161771	30.0000000%
Shamsa Ahmed Mohammed Abdulreda Husain Alahmadi / شمسه احمد محمد عبدالرضا حسين الاحمدى	United Arab Emirates / الامارات	799316	5.0000000%

Print Date 15/07/2021 13:22 تاريخ الطباعة

Receipt No. 13988401 رقم الإيصال

حكومة دبي
GOVERNMENT OF DUBAI

اقتصادية دبي
DUBAI ECONOMY

شهادة شهر قيد شركة فى السجل التجارى
Commercial Register

Register Details / تفاصيل القيد

Main Lice. Nr	547321	رقم الرخصة الأم	Register No.	1457868	رقم القيد
Company Name	HUB TEC BUILDING MATERIALS			هاب تيك لمواد البناء	
Legal Type	Limited Liability Company(LLC)			ذات مسئولية محدودة	الشكل القانونى
Expiry Date	20/07/2022	تاريخ الإنتهاء	Reg. Date	21/07/2003	تاريخ الإصدار
D&B D-U-N-S ® No.			534445259		الرقم العالمي

Capital Details / تفاصيل راس المال

Nominated	-1	الإسمى
Paid	300,000	المدفوع
No. of Shares	300	عدد الأسهم
Currency	UAE Dirhams	درهم اماراتي	العملة

License Address / عنوان الرخصة

مكتب M61-M62 ملك علياء عبدالرحيم احمد عبدالله - بردبي - القوز الثالثة

Commerce Address / عنوان السجل التجاري

مكتب M61-M62 ملك علياء عبدالرحيم احمد عبدالله - بردبي - القوز الثالثة

Register Activities / انشطة السجل

Building & Construction Materials Trading

تجارة مواد البناء

Print Date 15/07/2021 13:22 تاريخ الطباعة

Receipt No. 13988401 رقم الإيصال

الإمارات
THE EMIRATES

يمكنك الآن تجديد رخصتك التجارية من خلال الرسائل النصية القصيرة، أرسل رقم الرخصة إلى 6969 (دو/اتصالات) للحصول على اذن الدفع.
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حكومة دبي
GOVERNMENT OF DUBAI

اقتصادية دبي
DUBAI ECONOMY

Dear Trader,
Kindly take into consideration the following instructions

عزيزي التاجر:
نرجو أخذ التعليمات التالية بعين الاعتبار

1. Do not practice a business activity without a license or permit.
2. Do not change the license location or relocate to another site without getting DED approval.
3. Make sure of having a trade name compliant to the name mentioned in the license.
4. Do not place sales, discounts or special offers without permission.
5. Do not make any amendments or changes in the license information unless you request DED approval.
6. Make sure of putting down prices on goods and commodities.
7. Make sure of putting down the date of production and expiry.
8. The consumer has the right to receive an invoice.
9. Announce the sale and purchase policy to the customer using suitable media (noting the replacement, repair and recovery policy)
10. Do not promote or sell or offer any counterfeited or fake goods.
11. Make sure of registering your trade mark at the Ministry of Economy for protection.
12. Report to the Department of Economic Development incidents regarding any counterfeited goods in the local market.
13. In the case of warehouse or store related to the licenses, kindly visit Permits section in our branches (Business Village, AlTowar or Dubai Mall) to get the necessary permission.
14. According to the decision no. 323 of 2012 issued by His Excellency the Minister of Labor all enterprises that employ UAE and GCC nationals have up to a maximum period of three months to register them with the Ministry of Labor.

1. عدم مزاولة النشاط في موقع بدون ترخيص أو تصريح.
2. عدم القيام بتغيير موقع الترخيص والانتقال إلى موقع آخر دون الحصول على موافقة الدائرة.
3. ضرورة أن يكون الاسم التجاري المدون على اللافتة مطابق للاسم المدون بالرخصة.
4. عدم إجراء التنزيلات أو التصفيات أو العروض الخاصة بدون تصريح.
5. عدم إجراء أي تعديل أو تغيير بيانات الترخيص إلا بعد الرجوع للدائرة.
6. الالتزام بكتابة الأسعار على السلع والبضائع.
7. الالتزام بكتابة تاريخ الإنتاج والانتهاء على السلع.
8. للمستهلك الحق في الحصول على فاتورة الشراء.
9. الإعلان عن سياسة البيع للمستهلك عبر وسيلة إعلان مناسبة شاملة (العملية الاسترجاع أو الاستبدال أو الإصلاح للسلع).
10. عدم القيام بالترويج أو البيع أو العرض لأية بضائع مقلدة أو مغشوشة.
11. الحرص على تسجيل العلامة التجارية بوزارة الاقتصاد بهدف حمايتها.
12. إبلاغ الدائرة في حالة وجود أي منتج أو بضائع مقلدة في السوق المحلي.
13- في حال وجود مخزن أو مستودع تابع للرخصة فيرجى التكرم بزيارة قسم التصاريح في فرع قرية الاصال أو الطوار أو دبي مول للحصول على التصريح اللازم.
14. بناء على قرار معالي وزير العمل رقم 323 لعام 2012، على جميع المنشآت التي توظف مواطنين من دولة الامارات و دول مجلس التعاون أن تقوم بتسجيلهم لدى وزارة العمل خلال مدة أقصاها ثلاثة شهور

Print Date 15/07/2021 13:22 **تاريخ الطباعة** **Receipt No.** 13988401 **رقم الإيصال**

الإمارات
THE EMIRATES

يمكنك الآن تجديد رخصتك التجارية من خلال الرسائل النصية القصيرة، أرسل رقم الرخصة إلى 6969 (دو/اتصالات) للحصول على اذن الدفع.
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غـرفـــة دبـــي
DUBAI CHAMBER

شهادة تسجيل العضوية
Membership Certificate

License no.	547321	547321	رقم الرخصة
Membership no.	79486	79486	رقم العضوية
Registration no.	1457868	1457868	رقم السجل التجاري
Trade Name	HUB TEC BUILDING MATERIALS	هاب تيك لمواد البناء	الاسم التجاري
Legal Status	Limited Liability Company(LLC)	ذات مسئولية محدودة	الشكل القانوني
Activity	Building & Construction Materials Trading	تجارة مواد البناء	نوع النشاط
Member Since	21/07/2003	21/07/2003	تاريخ الإنتساب
Date of Issue	21/07/2003	21/07/2003	تاريخ الإصدار
Expiry Date	20/07/2022	20/07/2022	تاريخ الإنتهاء

Remarks

This certificate shall be invalid incase of any alteration without chamber's authorization

For online verification of this Certificate, please visit our website http://www.dubaichamber.ae/verify

الملاحظات

تعتبر هذه الشهادة لاغية في حال أي كشط أو تعديل عليها دون اعتماد ذلك من الغرفة

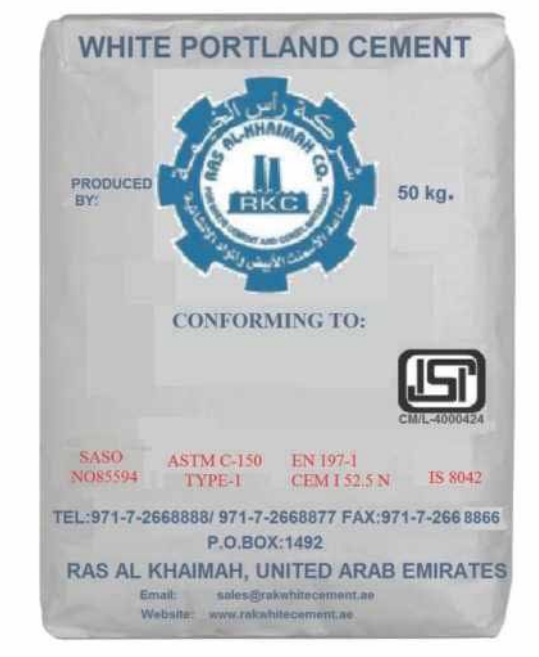
للتأكد من صحة بيانات الشهادة يرجى الرجوع إلى موقع الغرفة http://www.dubaichamber.ae/verify

غـرفـــة تجـــارة وصنـــاعـــة دبـــي
Dubai Chamber of Commerce & Industry

P.O. Box 1457 - Dubai, U.A.E. | Tel (Within UAE) 800 CHAMBER (800 2426237) | Tel (Outside UAE) (+971) 4 2280000 هاتف
Fax (+971) 4 2211646 فاكس | customercare@dubaichamber.ae | www.dubaichamber.ae

CEMENTS

WHITE CEMENT



RAK WHITE CEMENT

AVAILABLE IN: (50 KG)

TYPES: CEM I

CEM II

MANUFACTURED BY:

RAS AL KHAIMAH CO. FOR WHITE CEMENT & CONTS. MAT.

ORDINARY PORTLAND CEMENT (OPC)

LAFARGE (50 KG,BULK)

CLASSIC

Lafarge Emirates' Portland Cement is a premium quality, cost effective basic materials used in virtually all forms of constructions including plain and reinforced concrete, brick and stone ,mansory, floors and plastering, finishing of all types of structures etc. This general purpose cement suitable for all kinds of uses where the special properties of other types of Portland cement are not required. Lafarge Emirates' Portland Cement meets or exceeds all applicable chemical and physical requirements of BS EN 197-1:2000 CEM I 42.5 R & ASTM C 150-07 (type I).

Applications

Cast-in place plain and reinforced concrete, ready mix concrete, pre-cast and pre-stressed concrete, pavement concrete, architectural concrete, concrete mansory units, mansory

ALMAS

Lafarge Emirates' ALMAS Super can be used in wide range of applications including these that require high quality finishing along with high strength. ALMAS Super meets or exceeds all applicable chemical and physical requirements of BS EN 197-1 for CEM II / A-L.

Applications

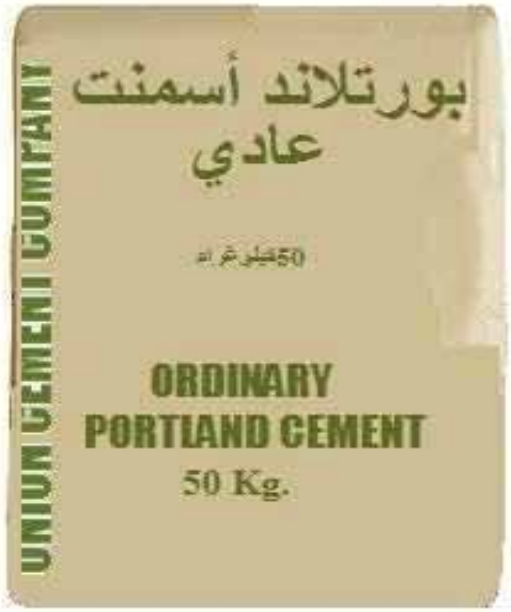
ALMAS Super is ideal for general purpose use in a wide range of applications: Majority of concrete products, general purpose ready-mix concrete, concrete block making, mortar for joining block, plaster/render, tile bed mortar, floor screeds, grout etc

RAK CEMENT

AVAILABLE IN: 50 KG &

BULK MANUFACTURED BY:

RAK CEMENT COMPANY



UNION CEMENT

AVAILABLE IN: 50KG & BULK

MANUFACTURED BY:

UNION CEMENT COMPANY (P.S.C.)

GULF CEMENT

AVAILABLE IN: 50 KG

MANUFACTURED BY:

GULF CEMENT COMPANY (P.S.C.)

BLOCKS, INTERLOCKS, KERBSTONE

BLOCKS

MANSORY BLOCKS

HOLLOW BLOCK

Come in a wide variety of shapes and sizes. They are made out of a mixture of Portland cement, sand, gravel and water.

(in compliance with international standard (ASTM, BS.)

Item	Hollow Block			
Length(mm)	400	400	400	400
Width(mm)	100	150	200	250
Thickness(mm)	200	200	200	200
Weight of block (kg)	13	16	21	26
Blocks/m2	12.5	12.5	12.5	125
Block/bundle	108	72	54	45

SOLID BLOCK

Used in foundations and above-grade masonry walls. This heavy weight solid block is uniformly square and free of large chips. These heavy weight interlocking gray blocks are uniform in texture, size and color while being dimensional and accurate.

(in compliance with international standard (ASTM, BS.)

Item	Solid Block		
Length(mm)	400	400	400
Width(mm)	100	150	200
Thickness(mm)	200	200	200
Weight of block (kg)	17	25	32
Blocks/m2	12.5	125	12.5
Block/bundle	108	72	54

HOURDI BLOCK

Blocks with ho llow cavities made using normal weight aggregates and are primarily used as filler in the construction of ribbed slabs. On special request, cellular types can also be made. Houdi blocks are manufactured with crushed aggregates. They are multi utility masonry blocks, which are getting more and more popular these days. They are suitable to withstand extreme climatic conditions. Hourdi blocks are used in the slab floor concrete. They are also known as filler blocks.

Item	Hourdi Block	
Length(mm)	4201380	
Width(mm)	250	300
Thickness(mm)	200	200
Weight of block	21	23
Blocks/bundle	45	36

THERMO BLOCK

Thermal insulated blocks are made of concrete consisting of selected aggregates and cement with extruded polystyrene of density 25 kg/m^3 , which is specially designed and placed symmetrically, is integrally locked into the concrete structure resulting in excellent thermal insulation and bonding.

ADVANTAGES OF USING

- The integrally bonded expanded polystyrene creates efficient thermal barrier.
- Environmental friendly CFC free polystyrene inserts provide good sound insulation.
- Polystyrene acts as excellent vapor and moisture barrier.
- Thermo block can save electricity costs by over 50%.
- Thermal modulation is reduced, leading to reduced demand on the air conditioning system.

Item	Thermo	
Length(mm)	400	400
Width(mm)	200	250
Thickness(mm)	200	200
Weight of block (kg)	20	22
Blocks/m2	12.5	125
Blocks/bundle	54	45

INTERLOCKS

RECTANGULAR SYSTEM

The basic block paviours and the both functional and decorative. Through simple in shape, rectangular blocks are the most commonly used blocks for sidewalks, petrol stations and driveways.

MODEL	A	B	C	D			E	F
Length(mm)	80	100	160	20			200	300
Width(mm)	80	100	160	10			200	300
Thickness(mm)	60	60	60	60	80	100	60	60
Weight (KG)	0.81	1.35	3.5	2.7	3.65	4.5	5.65	13.7
Blocks/m2	156.25	100	39	50	50	50	25	11

QUADRO SYSTEM

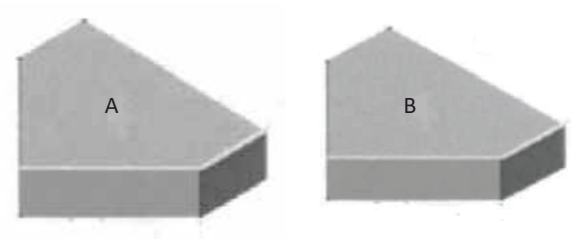
Another strikingly attractive paving block which is suitable and ideal for sidewalks, domestic driveways, park bays and any other area subject to light weight vehicular use. It is one of the most versatile and attractive block paving systems which offer almost unlimited rage laying patterns which can be made even more exciting by introducing contracting colours. The number of design possibilities with the quadro system limitless; ideal for villas,palces,courtyard.

MODEL	A	B	C
Length (mm)	200	200	80
Width (mm)	200	80	80
Thickness	60	60	60
Weight (kg)	4.45	2.7	0.8
Blocks/m2	29.7	52	156.25

LALINIA SYSTEM

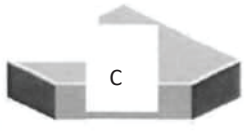
High quality combined concrete block and paving range. Using high quality exposed aggregates across a broad range of integrated plan sizes, La Linia is a subtly textured paving range that can be employed to generate striking visual effects through both colour and shape.

While the entire range is ideal for pedestrian areas in contemporary civic and retail schemes, La Linia block paving sizes are also suitable for occasional overrun.

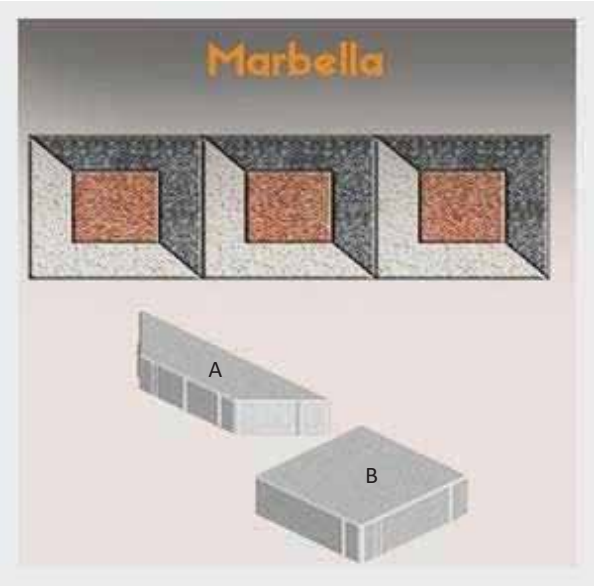


MODEL	A	B
Length (mm)	283	200
Width (mm)	200	200
Thickness (mm)	60	60
Weight (kg)	7	5.65
Block/m2	20.5	25

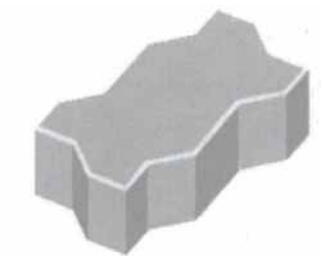
LADANA SYSTEM			
MODEL	A	B	C
Length (mm)	193	160	200
Width (mm)	160	160	100
Thickness (mm)	60	60	60
Weight (kg)	4.5	3.5	3.5
Block/m2	33	41	41



OUR PRODUCTS



MARBELLA SYSTEM		
MODEL	**A**	**B**
Length (mm)	400	200
Width (mm)	200	200
Thickness (mm)	60	60
Weight (kg)	4.3	5.65
Block/m2	33.5	25



UNI SYSTEM

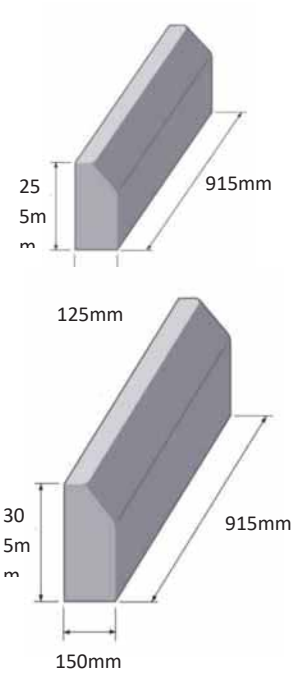
Highly economical concrete paver with outstanding capability. Its denticulation form creates a force fitting connection between block to block. The result is an optimal distribution of traffic loads and an even relief of tension. This capacity of taking loads increases the durability of traffic surfaces laid with Uni Block Interlocking Pavers.

UNI SYSTEM			
Length (mm)	225	225	225
Width (mm)	112.5	112.5	112.5
Thickness (mm)	60	80	100
Weight (kg)	3.65	4.86	6.07
Block/m2	39.5	39.5	39.6

3 – TILES

SIZES (mm)	THICKNESS (mm)
400X400	40
500X500	50
600X600	50
800X800	60

KERBSTONE



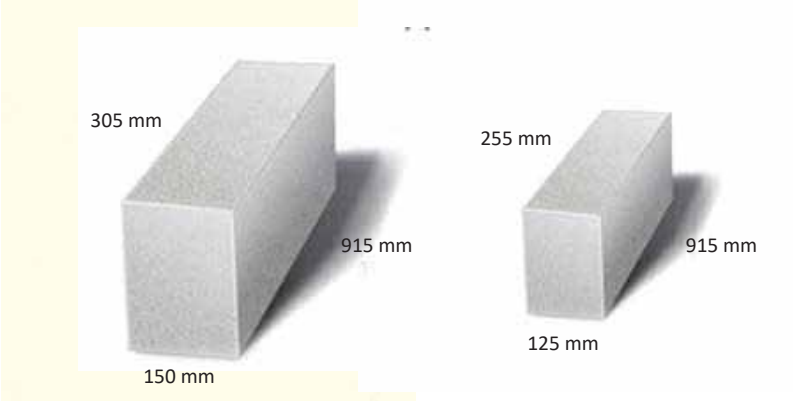
HALF BUTTERED

Cost effective, with consistent long-term performance, our concrete half battered kerbs provide heavy duty edging for pavements and carriageways. The slanting profile of a half battered kerb is particularly suited to providing a check to motorists if they are dangerously close to the edge of a carriageway.

OUR PRODUCTS

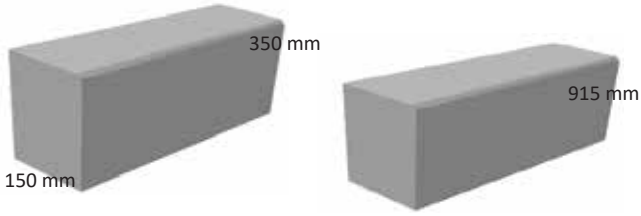
FLUSH

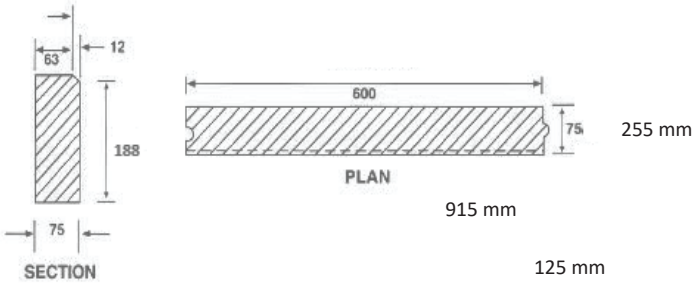
Its right-angled edges and straight lines, are most commonly seen in residential neighborhoods with light vehicular traffic. In such areas that witness heavy footfalls, the flush kerb allows a straight step down for pedestrians, thus making them less likely to trip over kerbs. Another reason for their popularity stems from the fact that flush kerbs require minimum modification when being laid at driveway entrances of homes and villas. The straight edges of the flush kerb allow them to be easily laid flush with the carriageway to provide access for cars. Flush kerbs are available in a variety of colours and finishes to suit any of your kerbing projects.



BULLNOSE

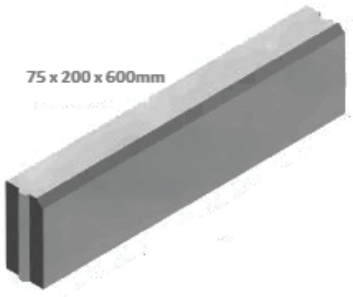
Straight and curved bullnose kerb stones in a variety of sizes to provide a heavy duty edging system suitable for paths, drives, roads, lawns and garden beds. Available in range of heights and profiles to provide distinction between road and pavement.

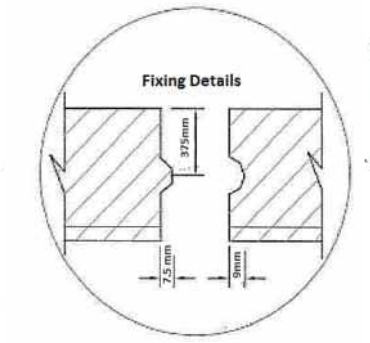


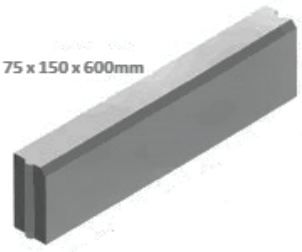


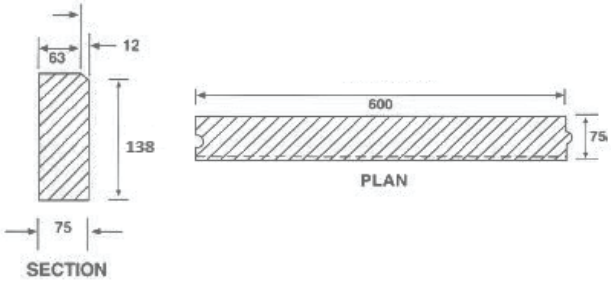
HEEL KERB

Designed to complement block paving and serve as an Ideal, attractive and versatile edge restraint.









ADHESIVES & SEALANTS

ADHESIVES

TILE GROUT (10 KG)

Available Colors

- WHITE
- GREY
- OFF WHITE
- CREAM
- BLUE-L
- GREEN
- BEIGE
- PINK
- GOLD
- GREEN-H
- YELLOW
- ROSE
- ORANGE
- BLUE-H
- OFF-9
- CHOCOLATE
- REDOXIDE
- BLACK

OUR PRODUCTS

TILE GLUE WHITE (20 KG)

Perfect adhesives for floor tiles.

TILE GLUE SUPER (20 KG)

Perfect adhesives for marble, ceramic, stones tiles.

TILE GLUE BEST (20 KG)

Perfect adhesives for wall tiles.

SEALANTS

BOND (15L, 20L)

DESCRIPTION

HUBTEC BOND PVA IS DERIVED FROM PLASTICIZED POLYVINYL ACETATE EMULSION FOR USE IN THE BUILDING INDUSTRY AS AN ADHESIVE AND ADDITIVE TO CONCRETE AND PLASTERS AND AS A UNIVERSAL BONDING AGENT AND ADMIXTURE FOR CEMENT.

ADVANTAGES

IT IS A UNIVERSAL BONDING AGENT, EASY TO APPLY, GOOD ADHESION AND EXCELLENT ABRASION RESISTANCE/ELASTICITY. IT IS DESIGNED TO BE USED FOR GULF CONDITION. NUMEROUS APPLICATIONS FROM ONE PRODUCT. ECONOMICAL AND SIMPLE TO USE.

MASTIC (20KG BUCKET)

DESCRIPTION

HUBTEC MASTIC *is* a scientific formulation of water repellant filler, asphalt, special polymer and thixotropic agent and U. V. resistance additive. It is a single component, ready to uses, with excellent adhesion to concrete, brickwork, asphalt and most construction materials.

USES:

HUBTEC MASTIC is universal compound ideal for roof flashing, details, patching of cracks and splits in roofs, repair or flashing details, roof busters, roof curbs, vent pipes, skylights, spouts, wall and foundation. It is also suitable to seal cracks in concrete walls and floors as well as tile joints. Multipurpose Sealing structural joints in concrete pavements, bridges, buildings, etc.

WATERPROOF (20 KG DRUM)

DESCRIPTION:

HUBTEC-WATERPROOF is a special synthetic resin based water proof coating. Because of its excellent flexibility and thixotropic nature is an ideal for use on vertical as well as horizontal surfaces. It is single pack, very economical and pollution free water proof coating. Due to its white colour, it has excellent solar insulation capacity.

ADVANTAGES:

- Life and durability of the structure is increased.
- Easy application, no machinery required.
- Light weight compared to conventional roofing systems, thereby loading on the roofs is reduced.
- Provides seamless and joint free seal throughout the surface, which is impervious to water.
- Lower labour cost due to easy, simple and quick application, leading to quick completion and time saving.
- Provides insulation due to solar reflection.
- Excellent bonding to most building materials.
- It provide protective membrane for polyurethane foam insulation.

ADDMIX (20L JERRY CAN)

DESCRIPTION

HUBTEC MASTIC *is a water reducing plasticizer for concrete based on a chloride-free lignosulphonate formulation which also acts as a powerful dispersing agent.*

USES:

- Ready mix concrete
- Pumped concrete
- Precast concrete
- Conventional concreting applications

BITUMEN (15L, 140KG, 200L)

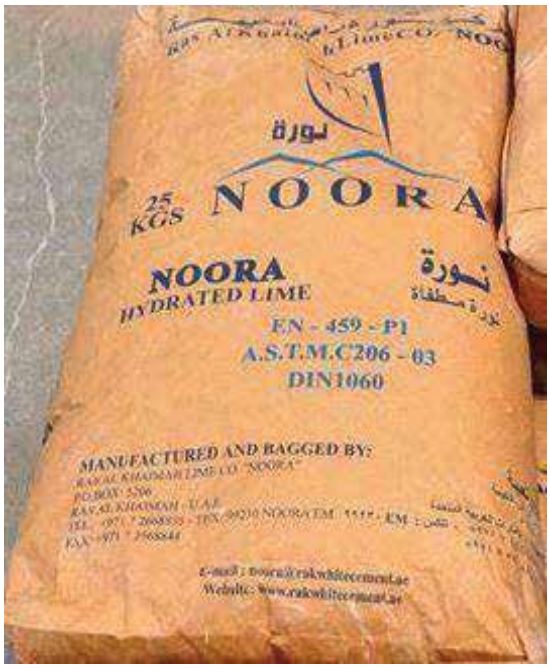
DESCRIPTION:

HUBTEC BITUMEN is a special liquid formulation, white curing and sealing compound based on acrylic resin emulsion, wetting agent and additive. It is used to prevent rapid evaporation of water from fresh concrete ensuring uniform hydration, adequate strength development and also minimize plastic shrinkage cracks. It is also used to seal concrete against ingress of water borne salts such as chlorides, sulphates and atmospheric carbon dioxide gas. It has excellent curing and sealing properties. HUBTEC BITUMEN is very cost effective and labour saving, eliminate and wet abrasion.

Plaster

Plaster is a building material used for the protective and or decorative coating of walls and ceilings and for molding and casting decorative elements. In English "plaster" usually means a material used for the interiors of buildings, while "render" commonly refers to external applications. Another imprecise term used for the material is stucco, which is also often used for plasterwork that is worked in some way to produce relief decoration, rather than flat surfaces.

HYDRATED LIME NOORA



Description:
A dry white powder consisting essentially of calcium hydroxide obtained by treating **Lime** with water — called also **Slaked Lime**.

Hydrated Lime and or blends of these with calcium carbonate and magnesium Limestone will help to speed Ph adjustment which can help to treat conditions

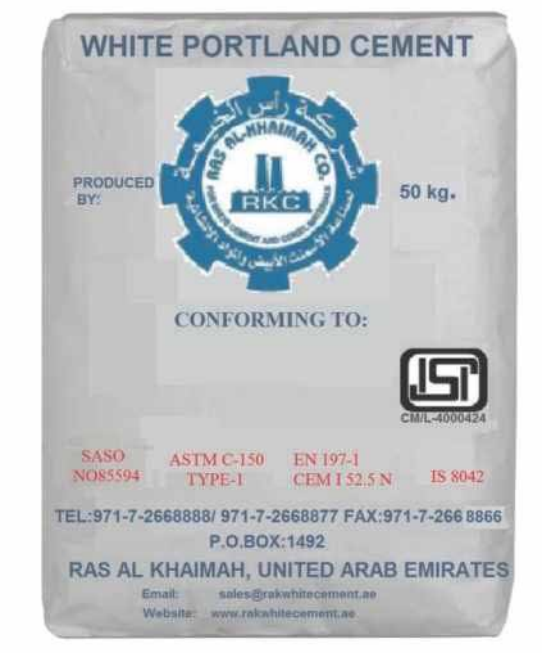
ABOUT US

CERTIFICATE/

TEST REPORT/ MSDS

ABOUT US

RAK WHITE CEMENT



IN-COUNTRY VALUE CERTIFICATE

Certificate ID: **110570**
Issue Date: **15.06.2021**
Valid Until: **24.05.2022**

HUB TEC BUILDING MATERIALS

25.19%

Company General Information
License No.: **547321**
Company Type: **SME in UAE**
Financial Year End Date: **31.12.2020**
Company based in: **Within UAE**
Company Business: **SERVICE PROVIDER**

For Cases of Re-Certification
Re-Certification (*) No.:

Reason for this Re-Certification

Signed By
On behalf of Supplier

Name:
Ahmed Mohammed Abdulreda Hussein Al Ahmadi

Designation:
Managing Director

Verified as per ICV Agreed Upon Procedures (AUP)
On behalf of Certification Body

Name:
ZAYED ABDULLAH AL ALI

Designation:
Approver

Electronically signed by ZAYED ABDULLAH AL ALI

Company:
Zayed Chartered Accountant For Auditing

Certificate Issued Based on ICV Version: 3.0

CERTIFIED TO BRITISH STANDARD KM 39126

MBF NOORA

شركة رأس الخيمة لصناعة الأسمنت الأبيض والمواد الإنشائية

RAS AL KHAIMAH CO. FOR WHITE CEMENT & CONST. MATERIALS

TÜV Rheinland CERTIFIED ISO 9001:2015 ISO 14001:2015 OHSAS 18001:2007 www.tuv.com ID 9108643660

MANUFACTURERS TEST CERTIFICATE

Printed on 14/08/2019 11:26:35

Certificate No :	RKC/RWC/QC/88/2019		RKC/IMSP4/R29
Standard :	European Standard (EN)	Week No :	32
Product :	White Portland Cement : "EN 197-1 CEM-I 52.5N"	From Date :	03/08/2019
Reference :		To Date :	09/08/2019

SL Nr.	Composition	Unit	Test Method	Analysis Value	Standard Value
Chemical Analysis					
1	Insoluble Residue (IR)	%	EN 196 - 2	0.29	Max : 5.00
2	Magnesium Oxide (MgO)	%	EN 196 - 2	0.48	Max : 5.00
3	Sulphate (SO3)	%	EN 196 - 2	3.26	Max : 4.00
4	Alkalies (Na2O+0.685K2O)	%	EN 196 - 2	0.44	N/A
5	Chlorides (Cl)	%	EN 196 - 2	0.03	Max : 0.10
6	Iron Oxide (Fe2O3)	%	EN 196 - 2	0.23	N/A
7	Loss On Ignition (LOI)	%	EN 196 - 2	2.63	Max : 5.00
8	Lime Satiration Factor (LSF)	%	EN 196 - 2	93.90	N/A
9	Tri Calcium Silicates (C3S)	%	EN 196 - 2	50.40	N/A
10	Tri Calcium Aluminates (C3A)	%	EN 196 - 2	10.90	N/A
Physical Analysis					
11	Standard Consistancy	%	EN 196 - 3	29.50	N/A
12	Specific Surface (Blaine)	m2/kg	EN 196 - 6	404.00	N/A
13	Soundness by Le-chatlier method	mm	EN 196 - 3	0.65	Max : 10.00
14	Setting Time (Vicat Method) Initial	Minutes	EN 196 - 3	85.00	Min : 45.00
15	Setting Time (Vicat Method) Final	Minutes	EN 196 - 3	145.00	N/A
16	Compressive Strength @ 02 days	MPa	EN 196 - 1	38.66	Min : 20.00
17	Compressive Strength @ 07 days	MPa	EN 196 - 1	57.36	N/A
18	Compressive Strength @ 28 days	MPa	EN 196 - 1	68.00	Min : 52.50
19	Color Tristimulus Y-Value	%	Hunter Lab Scale	86.60	N/A
20	Degree of Whiteness	%	Hunter Lab Scale	91.70	N/A

Remarks :Compressive Strength for 2 & 7 days is of previous week & 28 days is of four weeks before samples

Prepared by	Authorized by
Head of Laboratory 14/08/2019 08:16:41	Quality Assurance Manager 14/08/2019 10:34:45

Ras Al Khaimah Company for White Cement & Construction Materials

MATERIAL SAFETY DATA SHEET

FOR

WHITE PORTLAND CEMENT

SECTION 1: PRODUCT/COMPANY IDENTIFICATION

Manufacturer's Name & Address:	Chemical Family:
Ras Al Khaimah Company For White Cement P.O.Box: 1492 Ras Al Khaimah, (U.A.E.) Telephone Number for Information: 00971 7 2668888	Calcium Compounds CAS No: 65997 - 15 - 1 Chemical Name and Synonyms: White Portland Cement – Type 1 Trade Name and Synonyms: RAK White Cement Type -1

SECTION 2: COMPOSITION INFORMATION

DESCRIPTION: This product is used for white Cement production after grinding the white OPC clinker with limited % of Gypsum.) The portland cement clinker is made by heating to a high temperature a mixture of substances such as limestone, sand and Clay. Portland cement is essentially hydraulic calcium silicates contained in a crystalline mass, not separable into individual components. Major compounds are:

$3CaO \cdot SiO_2$	Tri-Calcium Silicate
$2CaO \cdot SiO_2$	Di-Calcium Silicate
$3CaO \cdot Al_2O_3$	Tri-Calcium Aluminate
$4CaO \cdot Al_2O_3 \cdot Fe_2O_3$	Tetra Calcium Aluminoferrite
$CaSO_4, 2\ H_2O$	Di-Hydrate Gypsum

SECTION 3: PHYSICAL/CHEMICAL PROPERTIES

APPEARANCE/ODOR:	White greenish colored fine Powder , odorless	PHYSICAL STATE:	Solid
Freezing Point	None (Solid)		
BOILING POINT:	> 1300 deg.C	MELTING POINT:	Not applicable
Vapor Density	N.A		
VAPOR PRESSURE:	Not applicable	VAPOR DENSITY:	Not applicable
Evaporation rate	Not applicable		
PH (IN WATER) (ASTM D 1293-95)	12 to 13	SOLUBILITY IN WATER at 25 deg.C	Slightly sol.(0.50 ~ 1.4%)
SPECIFIC GRAVITY (H_2O = 1.0):	3.06-3.08	EVAPORATION RATE:	Not applicable

SECTION 4: HAZARDOUS INGREDIENTS

TRACE INGREDIENTS:	

Due to the use of substances mined from the earth's crust, trace amounts of naturally occurring, potentially harmful constituents may be detected during chemical analysis. Portland cement may contain up to 0.75% insoluble residue. A small amount of this residue includes free crystalline silica. Portland cement Clinker also may contain trace (<0.05%) amounts of chromium salts or compounds (including hexavalent chromium) or other metals (including nickel compounds) found to be hazardous or toxic in some chemical forms. These metals are present mostly as trace substitutions within the principal minerals. Other trace constituents may include potassium and sodium sulfate compounds.

SECTION 5 : HAZARD IDENTIFICATION

POTENTIAL HEALTH EFFECTS:	NOTE: Potential health effects may vary depending upon the duration and degree of exposure. To reduce or eliminate health hazards associated with this product, use exposure controls or personal protection methods as described in Section 10.
EYE CONTACT:	(Acute/Chronic) Exposure to airborne dust may cause immediate or delayed irritation or inflammation of the cornea. Eye contact by larger amounts of dry powder or splashes of wet portland cement may cause effects ranging from moderate eye irritation to chemical burns and blindness.
SKIN CONTACT:	(Acute) Exposure to dry portland cement Clinker may cause drying of the skin with consequent mild irritation or more significant effects attributable to aggravation of other conditions. Discomfort or pain cannot be relied upon to alert a person to a hazardous skin exposure. (Chronic) Dry portland cement coming in contact with wet skin or exposure to wet portland cement clinker may cause more severe skin effects, including thickening, cracking or fissuring of the skin. Prolonged exposure can cause severe skin damage in the form of chemical (caustic) burns. (Acute/Chronic) Some individuals may exhibit an allergic response upon exposure to portland cement clinker. The response may appear in a variety of forms ranging from a mild rash to severe skin ulcers.
INHALATION:	(Acute) Exposure to portland cement may cause irritation to the moist mucous membranes of the nose, throat and upper respiratory system. Pre-existing upper respiratory and lung diseases may be aggravated by inhalation of portland cement . (Chronic) Inhalation exposure to free crystalline silica may cause delayed lung injury including silicosis, a disabling and potentially fatal lung disease, and/or cause or aggravate other lung diseases or conditions.
INGESTION:	(Acute/Chronic) Internal discomfort or ill effects are possible if large quantities are swallowed.
CARCINOGENIC POTENTIAL:	White Portland cement is not recognized as a carcinogen by NTP, OSHA, or IARC. However, it may contain trace amounts of heavy metals recognized as carcinogens by these organizations. In addition, IARC classifies crystalline silica, a trace constituent, as a known human carcinogen (Group I). NTP has characterized respirable silica as "reasonably anticipated to be a carcinogen." (See also Section 13.)

SECTION 6 : EMERGENCY AND FIRST AID

EMERGENCY INFORMATION:	White Portland cement is a white powder . When in contact with moisture in eyes or on skin, or when mixed with water, white portland Cement becomes highly caustic (PH > 12) and will damage or burn (as severely as third-degree) the eyes or skin. Inhalation may cause irritation to the moist mucous membranes of the nose, throat and upper respiratory system or may cause or may aggravate certain lung diseases or conditions. Use exposure controls or personal protection methods described in Section 10.
EYES:	Immediately flush eye thoroughly with water. Continue flushing eye for at least 15 minutes, including under lids, to remove all particles. Call physician immediately.
SKIN:	Wash skin with cool water and pH-neutral soap or a mild detergent. Seek medical treatment if irritation or inflammation develops or persists. Seek immediate medical treatment in the event of burns.
INHALATION:	Remove person to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration. Seek medical help if coughing and other symptoms do not subside. Inhalation of large amounts of portland cement require immediate medical attention.
INGESTION:	Do not induce vomiting. If conscious, have the victim drink plenty of water and call a physician immediately.

SECTION 7 : FIRE AND EXPLOSION

FLASH POINT:	None	LOWER EXPLOSIVE LIMIT:	None
AUTO IGNITION TEMPERATURE:	Not combustible	UPPER EXPLOSIVE LIMIT:	None
FLAMMABLE LIMITS	Not applicable	SPECIAL FIRE FIGHTING PROCEDURES:	None
EXTINGUISHING MEDIA:	Not combustible	UNUSUAL FIRE AND EXPLOSION HAZARDS:	None
HAZARDOUS COMBUSTION PRODUCTS:	None		

SECTION 8: STABILITY AND REACTIVITY DATA

STABILITY:	Product is stable. Keep dry until used.
CONDITIONS TO AVOID:	Un- intentional contact with water. Contact with water will result in hydration and produces (caustic) calcium hydroxide.
INCOMPATIBILITY:	Wet portland cement Clinker is alkaline. As such, it is incompatible with acids,
HAZARDOUS DECOMPOSITION:	Will not occur.
HAZARDOUS POLYMERIZATION:	Will not occur.

SECTION 9 : PRECAUTIONS FOR HANDLING, & STORAGE

HANDLING AND STORAGE	Keep dry until used. Handle and store in a manner so that airborne dust does not exceed applicable exposure limits. Use adequate ventilation and dust collection. Use exposure control and personal protection methods as described in Section 10.
SPILL:	Use dry clean-up methods that do not disperse dust into the air or entry into surface water. Material can be used if not contaminated. Place in an appropriate container for disposal or use. Avoid inhalation of dust and contact with skin and eyes. Use exposure control and personal protection methods as described in Section 10.
Storage Temperature :	Unlimited Storage pressure : unlimited
Usage :	While Cutting , Crushing or grinding Cement Clinker , hardened Concrete or other crystalline silica bearing materials , use all appropriate measures of dust control with personal protective equipments (PPE)

SECTION 10: EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION:	Use local exhaust or general dilution ventilation to control dust levels below applicable exposure limits. Minimize dispersal of dust into the air. If local or general ventilation is not adequate to control dust levels below applicable exposure limits or when dust causes irritation or discomfort, use approved respirators.
EYE PROTECTION:	Wear safety glasses with side shields or goggles to avoid contact with the eyes. In extremely dusty environments and unpredictable environments, wear tight-fitting unvented or indirectly vented goggles to avoid eye irritation or injury. Contact lenses should not be worn when handling cement containing products.
SKIN PROTECTION:	Wear impervious abrasion- and alkali-resistant gloves, boots, long-sleeved shirt, long pants or other protective clothing to prevent skin contact. Promptly remove clothing dusty with dry portland cement or clothing dampened with moisture mixed with white portland Cement, and launder before re-use. If contact occurs, wash areas contacted by material with pH neutral soap and water.

SECTION 11 : ECOLOGICAL INFORMATION

Mobility :	Sinks in Water . Almost insoluble in water.
Toxicity :	This product is not hazardous to the environment. The addition of large amounts of cement clinker to water may , however cause a rise in PH and may , therefore, be toxic to aquatic life under certain circumstances.
Mobility in Soil :	Not relevant

Breakdown : During long exposure to open air in humid condition , Cement deteriorates slowly , Tri-calcium silicate component is converted to C2S and Ca(OH)2 ..This ca(OH)2 reacts with CO2 of the atmosphere and is carbonized.

Bioaccumulative Potential :	Not relevant as cement Clinker is an inorganic material. After hardening it presents no toxicity risks.

Other informations : The product is alkaline in water raising the PH of water up to 13.0 and is composed of calcium compounds with silica, Alumina & Iron .and is not classified as " Dangerous to Environment.

SECTION 12 : TOXICOLOGICAL INFORMATION

GENERAL :	Apart from Skin sensitization, portland Cement clinker in contact with water may cause severe burn, , cracking or fissuring of the Skin after proloned contact.

Potential acute effects.

Inhalation:	Clinker dust may irritate the throat and respiratory tract. Coughing, Sneezing and shortness of breath may Occur following exoposure in excess of Occupational exposure limits.
Skin Contact :	Skin corrosion / irritation cat : 2
Eye Contact :	Serious eye damage / irritation - Cat 1
Mutagenicity	No indication
Carcinogenicity	No casual association has been stablished b/w Cement Clinker exposure and Cancer.

SECTION 13 : PRECAUTIONS FOR DISPOSAL

DISPOSAL:	Comply with all applicable local, state and federal regulations for disposal of unusable or contaminated materials. Dispose of packaging/containers according to local, state and federal regulations.
	Product if exceeded its shelf life or unused residue or hardened product after addition of water should not be used and will be subjected to appropriate methods of disposal.
EWC waste code	EWC : 101314 waste concrete and concrete Sludge EWC : 170101 Concrete
Other informations :	Do not dispose of into Sewage systems or surface waters.

SECTION 14 : TRANSPORT INFORMATION

14.1	UN number	Not relevant
14.2	UN proper Shipping Name	Not relevant
14.3	Transport hazard Classes	Not relevant
14.4	Packing group	Not relevant
14.5	Environmental Hazards	Not relevant
14.6	Special Cautions for user	Not relevant
14.7	Transport in bulk according to Annex II of MARPOL 73 / 78 and the IBC Code	
	Pollution Category	Not relevant

This product is not classified as hazardous Material under US DOT or Canadian TDG regulations.

Other applicable information :	Cement is not Covered by the international regulation on the No special precautions are needed apart from those mentioned under Section 10.

SECTION 15 : REGULATORY INFORMATIONS

SECTION 15 : REGULATORY INFORMATIONS

Classification:	Hazard Symbol
	X
	Irritant

R Phrases R 37 / 38 Irritating to respiratory system and skin. R 41 risk of serious damage to eyes. May Cause sensitization by skin Contact. In contact with water, Cement is corrosive to skin and eyes.

IATA rules & regulations : Packaging, labeling & dispatch of specimens are classified into diagnostic and infectious substances which are respectively under regulation 650 and 602 while Cement does not fall in this category.

OSHA / MSHA Hazard : This product is considered to be a hazardous chemical and should be included in the employer,s hazard communication program.

EPCRA / SARA - III under section 311 & 312 is considered a delayed health hazards.

TSCA Portland cement clinker & crystallised Silica are exempted from reporting under the inventory update rule.

SECTION 16: Other information

The information provided herein is believed by Ras Al Khaimah Co. for White Cement & Construction Materials to be accurate at the time of preparation or prepared from sources believed to be reliable. Health and safety precautions in this data sheet may not be adequate for all individuals or situations. Users have the responsibility to comply with all laws and procedures applicable to the safe handling and use of the product, to determine the suitability of the product for its intended use, and to understand possible hazards associated with mixing portland cement with other materials.

SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY Ras Al Khaimah Co, for White Cement & Constuctional Materials.

Abbreviations used in MSDS sheet :

CAS No:	Chemical Abstract Service No
MSHA :	Mine safety & Health administration
DOT :	US department of Transportation.
OSHA :	Occupational safety & Health administration
PPE	Personal protective Equipments.

Last updated : 20- 05-2015

شركة رأس الخيمة لصناعة الأسمنت الأبيض والمواد الأنشائي

Ras Al Khaimah Co. for White Cement & Const.Materials.

WHITE CEMENT FACTORY

Khor Khowair
P.O.Box : 1492
Phone : 971 - 7 - 2668888
Fax : 971 - 7 - 2668866
United Arab Emirates

خور خوير
ص.ب : 1492 - رأس الخيمة
تليفون : 971 - 7 - 2668888
فاكس : 971 - 7 - 2668866
الامارات العربية المتحدة

MANUFACTURER,S TEST CERTIFICATE
WHITE PORTLAND LIMESTONE CEMENT
EN 197-1 CEM-2 BL 42.5N

Manufactured under
A BSEN ISO 9001 - 2008 QUALITY SYSTEMS

CHEMICAL ANALYSIS		EN 197-1 CEM-2 BL 42.5N REQUIREMENTS	WCC Range
I.R	%		0.50 - 0.80
MgO	%		0.50 - 0.80
SO3 :	%	Max: 4.0	2.50 - 3.00
Na2O.equiv.	%		0.20 - 0.40
Chloride	%	Max: 0.10	0.030 - 0.050
L.O.I	%		14.0 - 18.0
PHYSICAL TESTS		**EN 197-1 CEM-2 BL 42.5N REQUIREMENTS**	**TEST RESULTS**
Fineness			
Blaine's Test	M2/Kg		380 - 450
Soundness			
Autoclave	%		0.010 - 0.040
Le-Chatlier	mm	Max : 10	0.50 - 2.0
Setting Time			
Initial Set (Vicat)	Minutes	Min : 60	100 - 150
Final Set	Minutes		180 - 230
Compressive Strength	N/mm2		
2 D Strength		Min : 10	14.0 - 18.0
28 D Strength		Min : 42.5	44.0 - 48.0
Colour			
Tristimulus Y-Value	%		83.0 86.0
Whiteness	%		89.0 - 93.0

Quality Control Manager
Date: 31/07/12

Website : http://www.rakwhitecement.ae

The Towers FZ - LLC	GS	

Proposed Building (3B+G+21+Roof)
Plot No. IMPZ.K.15 at Me'Aisem First Dubai, UAE

CLIENT	CONSULTANT	CONTRACTOR
THE TOWERS FZ - LLC	GOLDEN SQUARE ENGINEERING CONSULTANTS	MODERN BUILDING CONTRACTING COMPANY

REF NO	PRE-QUALIFICATION SUBMITTAL	DATE
SC/IMPZ/PQ/0005		23-May-18

Sub contractor Name & Stamp	Contract Ref
HUB TEC Building Materials	

Scope of Work

Civil Material Works

Item Description:	Pre-Qualification Document	
Supplier / Manufacturer:		
Engr. Loai Sommad Contractor's Name & Stamp	23/05/2018 Contractor's Sign & Date	23 MAY 2018 RECEIVED (3B+G+21+R) At Me'Aisem First, Dubai, UAE Consultant's Receipt Sign & Date

GOLDEN SQUARE ENGINEERING CONSULTANTS

For Consultant's use

The above submittal is: o Approved ✓ Approved as Noted o Resubmit o Rejected

Comments

1. Delivered material should be complied with DM requirement.
2. Test certificates are to be provided for all type of materials
3. Materials are to be used should be complied with the project requirement and specifications.

Engr. Alaa Faiq	27/5/2018	28.05.18
Name,Sign, Date & Stamp Resident Engineer	Name,Sign & Date Discipline Engineer	Name,Sign, Date & Stamp Contractor Receiving

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HYDRATED LIME

Year: 2018

Alternate Names : Slaked Lime, Calcium Hydroxide, Ca (OH)2
Analytical Method : ASTM C25-11, C110-14

Typical Specifications - A

Compositions	Specs. (% Wt)
Available Lime (As Calcium Hydroxide)	Min: 92.00
Available Lime (As Calcium Oxide)	Min: 69.70
Total Calcium Oxide (CaO)	Min: 70.50
Carbon Dioxide (CO_2)	Max: 1.53
Unburnt Calcium Carbonate ($CaCO_3$)	Max: 3.50
Magnesium Oxide (MgO)	Max: 1.50
R_2O_3 (Al_2O_3 + Fe_2O_3)	Max: 0.50
Silicon Dioxide (SiO_2)	Max: 1.00
Sulphur as SO_3	Max: 0.35
Acid Insoluble Residue	Max: 0.35
Loss On Ignition (L. O. I)	Max: 25.00
Flouride	< 0.050
Barium	< 0.00003
Zinc	< 0.0009
Lead	< 0.0000001
Chromium	< 0.00006
Cadmium	< 0.0000001
Copper	< 0.00004
Arsenic	< 0.000006

Particle Size	Fine Powder (> 99.0 % passing 75 Mic)
Physical Properties	
Colour	White
Bulk Density	560 Kg/M^3
Packing	In 25kg, 7.5 kg, 3 ply white/brown, PE coated paper bags, In bulk tankers. In 500 kg jumbo bags.

Jose 21/02/18

Abdulla Al Mansori
Sales Manager

RAS AL KHAIMAH CO. RKG Q.C. LAB

21/02/18

C. Sudhakara Rao
Quality Assurance Manager

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Material Safety Data Sheet
Calcium Hydroxide

Section 1: Chemical Product and Company Identification

Product Name: Calcium hydroxide

CAS#: 1305-62-0

TSCA: TSCA 8(b) inventory: Calcium hydroxide
CI#: Not applicable.
Synonym: Hydrated lime; Slaked Lime; Calcium Oxide,hydrated
Chemical Name: Calcium Hydroxide
Chemical Formula: Ca(OH)2

Contact Information:
Noora Lime Co.
PO Box No. 5206 Ras Al khaimah, UAE
Tel : 9717 2668855, Fax : 9717 2668844,
E- Mail : noora@rakwhitecement.ae
Order Online: Noora

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Calcium hydroxide	1305-62-0 100	100

Toxicological Data on Ingredients: Calcium hydroxide: ORAL (LD50): Acute: 7340 mg/kg [Rat.] 7300 mg/kg [Mouse].

Section 3: Hazards Identification

Potential Acute Health Effects:

Very hazardous in case of eye contact (irritant). Hazardous in case of skin contact (irritant), of eye contact (corrosive), of ingestion, of inhalation. Corrosive to eyes and skin. The amount of tissue damage depends on length of contact. Eye contact can result in corneal damage or blindness. Skin contact can produce inflammation and blistering. Inhalation of dust will produce irritation to gastro-intestinal or respiratory tract,characterized by burning, sneezing and coughing. Severe overexposure can produce lung damage, choking, unconsciousness or death. Inflammation of the eye is characterized by redness,watering, and itching.

Potential Chronic Health Effects:

Hazardous in case of skin contact (irritant). CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: N.A TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: N.A. Repeated exposure of the eyes to a low level of dust can produce eye irritation. Repeated skin exposure can produce local skin destruction, or dermatitis. Repeated inhalation of dust can produce varying degree of respiratory irritation or lung damage.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 1 5 minutes. Cold water may be used. Get medical attention immediately.

Skin Contact:

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used.Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Serious Inhalation: N.A

Ingestion:

Do Not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Non-flammable.
Auto-Ignition Temperature: Not available
Flash Points: Not available
Flammable Limits: Not available
Products of Combustion: Not available.
Fire Hazards in Presence of Various Substances: Not applicable.
Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.
Fire Fighting Media and Instructions: Not applicable.
Special Remarks on Fire Hazards: Alkaline hydroxides boiled with phosphorus yields mixed phosphines which may ignite spontaneously in air.
Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill:

Use appropriate tools to put the spilled solid in a convenient waste disposal container. If necessary, neutralize the residue with a dilute solution of acetic acid. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:

Corrosive solid. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Neutralize the residue with a dilute solution of acetic acid. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

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Section 7: Handling and Storage

Precautions:

Keep container dry. Do not ingest. Do not breathe dust. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as acids.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 25°C (77°F).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:

Splash goggles. Synthetic apron. Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent.Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Vapor and dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist before handling this product.

Exposure Limits:

TWA: 5 (mg/m3) from ACGIH (TLV) [United States] TWA: 5 (mg/m3) [Canada] TWA: 5 (mg/m3) from NIOSH

Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance : Solid. (Powdered solid.)

Soft, white crystalline powder.

Odor : Odorless.

Taste: Bitter. Alkaline. (Slight.)

Molecular Weight: 74.1g / mole

Color : White.

pH (1% sol. / water) : 14 [Basic]

Dehydration Temp. 580°C (1076°F)

Melting Point: > 2700 deg.C

Boiling Point: > 2850 deg.C

Critical Temperature: Not available.

Vapor Pressure: Not applicable.

Vapor Density: Not available

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff : Not available

Ionicity (in Water) : Not available.

Dispersion Properties: See solubility in water.

TYPICAL SPECIFICATIONS:

Available lime (As Calcium Hydroxide)	> 93.5	%
Available lime (As Calcium oxide)	> 70.5	%
Total Calcium Oxide (CaO) :	> 72.5	%
Loss on Ignition (L.O.I):	Max 24.5	%
Acid Insoluble Residue:	Max 0.35	%

Specific Gravity: 2.55 ~ 2.75 (Water = 1)

Bulk Density: 540 ~ 560 kg / m3

Total Calcium Carbonate (CaCO3) :	< 3.0	%
Magnsium Oxide (MgO):	< 1.50	%
R2O3 (Al2O3 + Fe2O3):	< 0.45	%
Silicon Dioxide (SiO2):	< 1.0 %	%

Solubility:

Very slightly soluble in cold water, hot water. Insoluble in alcohol. Soluble in ammonium salts, glyerol, sugar or ammonium chloride solution, soluble in acids with evolution of much heat.

Solubility in water: 0.185 g/100 ml @ 0 deg. C; 0.077 g/100 ml @ 100 deg. C; 1.73 g/1000 ml @ 20 C

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Section 10: Stability and Reactivity Data

Stability: The product is stable.
Instability Temperature: Not available.
Conditions of Instability: Incompatible materials, air
Incompatibility with various substances: Reactive with acids.
Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity:

Incompatible with maleic anhydride, phosphorous, nitroethane, nitromethane, nitorparaffins, nitropropane, polychlorinated phenols + potassium nitrate. When chlorinated phenols are heated for analytical purposes with calcium hydroxide-potassium nitrate mixutures, chlorinated benzodioxins analagous to extremely toxic tetrachlorodibenzodioxin may be formed. Readily absorbs CO2 from air forming calcium carbonate.

Special Remarks on Corrosivity: Not available.
Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Inhalation. Ingestion.
Toxicity to Animals: Acute oral toxicity (LD50): 7300 mg/kg [Mouse].
Chronic Effects on Humans: Not available.

Other Toxic Effects on Humans:

Extremely hazardous in case of eye contact (irritant) Hazardous in case of skin contact (irritant), of eye contact (corrosive), of ingestion, inhalation Slightly hazardous in case of skin contact (corrosive, permeator).

Special Remarks on Toxicity to Animals:

Not available.

Special Remarks on Chronic Effects on Humans: Mutangenicity: Cytogenic analysis [Rat]: Cell type: Ascities tumor; Dose: 1200 mg/kg

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects: Skin: Causes skin irritation. Alkalies penetrate skin slowly. The extent of damage depends on the duration of contact. Eyes: Causes severe irritation of the eyes. Can cause "Lime Burns" of the eye. Clumps may lodge deep in the recesses of the eye, releasing calcium hydroxide over a long period of time. Severe burns of the cornea with possible damage to to corneal nerves can occur. Ingestion: Causes gastrointestinal tract irritation with vomiting, diarrhea, severe pain. Vomitus may contain blood and desquamated mucosal lining. May cause delayed gastrointestinal burns and perforation (gastric or esophageal) with severe abdominal pain and rapid fall in blood pressure. Inhalation: Causes severe irritation of the respiratory tract (nose, throat, lungs), and mucous membranes with coughing, wheezing and/or shortnessof breath. Material is destructive to tissue of the mucous membranes and upper respiratory tract. Chronic Potential Health Effects: Prolonged or repeated skin contact may produce severe irritation or dermatitis.

Section 12: Ecological Information

Ecotoxicity : Not available.
BOD and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. But long term degradation products may arise.
Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.
Special Remarks on the Products of Biodegradation: Not available.

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Section 13: Disposal Considerations

Waste Disposal:

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).
Identification: Not applicable.
Special Provisions for Transport: Not applicable.

Section 15: Other Regulatory Information

Federal and State Regulations:

IllinoisToxic substances disclosure to employee act: Calcium hydroxide Rhode Island RTK hazardous Subs: Ca(OH)2
Pennsylvania RTK: Calcium hydroxide Minnesota: Calcium hydroxide Massachusetts RTK: Ca(OH)2
New Jersey: Calcium hydroxide
California Director's list of Hazardous Substances: Calcium hydroxide TSCA 8 (b) inventory: Calcium hydroxide

Other Regulations:

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada): CLASS E: Corrosive solid.
DSCL (EEC):
R34 - Causes burns. R41- Risk of serious damage to eyes. S24/25 - Avoid contact with skin and eyes. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S28- After contact with skin, wash immediately with plenty of water. S36/37/39- Wear suitable protective clothing, gloves and eye/face protection. S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where

HMIS (U.S.A.):
Health Hazard: 2
Fire Hazard: 0
Reactivity: 0
Personal Protection: j
National Fire Protection Association (U.S.A.) :
Health: 2
Flammability: 0
Reactivity: 0
Specific hazard:

Protective Equipment:

Gloves. Synthetic apron. Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

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Section 16: Other Information

References:

Hawley, G.G.. The Condensed Chemical Dictionary, 11e ed., New York E251 N.Y., Van Nostrand Reinold, 1987.
Material safety data sheet emitted by: la Commission de la SantÃ© et de la SÃ©curitÃ© du Travail du QuÃ©bec. -
SAX, N.I. Dangerous Properties of Indutrial Materials. Toronto, Van Nostrand Reinold, 6e ed. 1984. -
The Sigma-Aldrich Library of Chemical Safety Data, Edition II.

Other Special Considerations: Not available.

Created: 02 /10/2006 10:15 AM

Last Updated: 10 / 11 / 2016 14:00 PM

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04/01/17

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ABOUT US

LAFARGE

CONTRACT: **F1003 KIFAF DEVELOPMENT - PHASE I, PLOT NO. 324-6457 SHEIKH ZAYED ROAD DUBAI, U.A.E.**	**CLIENT:** **PARK 1 LLC** **(Wasl - represened by wasl LLC)**
CONSULTANT: **ARCHGROUP**	**CONTRACTOR:** **KELE CONTRACTING LLC**

MATERIAL APPROVAL SHEET

MAS Ref. : **MAS/KIFAF/003** **Rev:** **0** **Date: 18-July-17**

Item : **Lafarge OPC Cement**

Supplier: **HubTec Bldg Materials** Manufacturer : Lafarge OPC Cement

Date on which required at site: As per Requirement

BOQ Ref: BS Ref:

Spec.Ref: Section E - 3 Sample attached: Yes ☐ No ■

Compliance Statement attached: Yes ☐ No ■

Drg Ref: Certificate Attached: Yes ■ No ☐

Assurance of

Delivery on time: Yes ■ No ☐

Remarks:

CONTRACTOR:

Name / Signature: Mr. Leslie Fairchild / Sr. Project Manager Date:

ENGINEER:

Above Information given by Contractor is Correct Yes ☐ No ☐

Required information 1

2

3

Material Recommended ☑ / Rejected ☐

Recommendation with Comments: • ENSURE DUBAI MUNICIPALITY REGULATION COMPLIANCE TO USE PROPOSED PRODUCT IN DUBAI STORAGE

Name/Signature: BIJOY KURIAN Date: 26-07-'17

EMPLOYER:

Material Recommended ☐ / Rejected ☐

Approved with additional comments

Comments: 1

2

3

Name/Signature: Date:

23/7/17

DATA SHEET

CEMENT

CLASSIC
Portland Cement

LAFARGE
bringing materials to life™

Portland Cement
CEM I 42,5 R

Lafarge Emirates' Portland Cement is a premium quality, cost-effective basic building material used in virtually all forms of constructions including plain & reinforced concrete, brick & stone masonry, floors & plastering, finishing of all types of structures etc. This is general-purpose cement suitable for all kind of uses where the special properties of other types of Portland cement are not required. Lafarge Emirates' Portland Cement meets or exceeds all applicable chemical and physical requirements of BS EN 197-1:2000 for CEM I 42.5 R & ASTM C 150 - 07 (Type I). It is produced by inter-grinding of cement clinker & a small quantity of gypsum.

Applications:
Cast-in-place plain & reinforced concrete, Ready mix concrete, Pre-cast & pre-stressed concrete, Pavement concrete, Architectural concrete, Concrete masonry units, Masonry mortars, Grouts, Renders, screeds, etc..

Features & benefits:
- Guaranteed premium product with high uniformity & consistent quality.
- High early & final strength: Strength class of Lafarge Emirates' Portland Cement is 42,5 R which implies that high strength is achieved at an early age. It attains 23–27 MPa strength at 2 days and 53–57 MPa strength at 28 days.
- Low alkali Cement: Alkali content is low which is effective to prevent damage from Alkali Silica Reaction (ASR).
- Cost Savings: Perceptible saving in costs due to slump retention at lower admixture dosage, high early & final strength.
- Conforms to both BS EN 197-1:2000 (CEM I) & ASTM C 150 - 07 (Type I) standards : The requirements of these two standards are compared in the table to typical performance data for Lafarge Emirates' Portland Cement.

Requirements of standards and typical properties of Lafarge Emirates' Portland Cement

Property	Standard Requirement for Portland Cement		Typical values* of Lafarge Emirates' Portland Cement CEM I 42.5 R
	ASTM C 150 - 07 (Type I)	BS EN 197-1 : 2000 (CEM I 42.5 R)	
Silicon Dioxide (SiO_2)	----	----	19.50 – 20.50 %
Aluminum Trioxide (Al_2O_3)	----	----	4.50 – 5.10 %
Ferric Oxide (Fe_2O_3)	----	----	3.30 – 3.70 %
Calcium Oxide (CaO)	----	----	63.00 – 64.00 %
Magnesium Oxide (maximum)	6 %	----	1.00 – 2.00 %
Sulfate (as SO_3) (maximum)	3 %	4 %	2.60 – 2.95 %
Tri Calcium Aluminate (C_3A)	----	----	6.70 – 7.50 %
Equivalent Alkalis (maximum)	0.60 %	----	0.48 – 0.58 %
Chloride (maximum)	----	0.10 %	0.01 – 0.05 %
Loss on Ignition (maximum)	3 %	5 %	2.50 – 2.95 %
Insoluble Residue (maximum)	0.75 %	5 %	0.20 – 0.70 %
Compressive Strength : 2 days (minimum)	----	20.0 MPa	23 – 27 MPa
Compressive Strength : 7 days (minimum)	19.0 MPa	----	40 – 44 MPa
Compressive Strength : 28 days (minimum)	----	42.5 MPa	53 – 57 MPa
Initial Setting Time (minimum)	45 minutes	60 minutes	150 – 190 minutes
Final Setting Time (maximum)	375 minutes	----	200 – 240 minutes
Soundness (maximum)	0.8 %	10 mm	0.00 – 2.00 mm
Fineness (minimum)	280 m^2/kg	----	320 – 350 m^2/kg

* Values obtained from tests as per BS EN standards.

Admixture additions: It is recommended to carry out trial mixes to verify admixture compatibility with Portland cement & to find out optimum admixture dosage.

Test Certificates: Routine product test data covering the key physical and chemical parameters are made available on weekly basis on request.

Availability: Portland Cement is supplied both in bulk tanker & 50 kg bag.

Storage:
Cement should be stored dry to avoid its quality deterioration due to premature hydration and carbonation. Moisture from the air can be as harmful as direct moisture. Cement in bulk should be stored in well-maintained silo with no damp air or moisture ingress. Bags should be stored unopened and clear off the ground in dry conditions and should be stacked in a safe and stable manner.

Other Information

Health & Safety:
Contact between cement powder and body fluids (e.g. sweat and eye fluids) may cause irritation, dermatitis or burns. Wear suitable protective clothing, dust mask, protective goggles, gloves while handling. Immediately wash with plenty of clean water when it comes in contact with eye or skin. Seek immediate medical advice for persistent or severe discomfort.

Technical Support:
Further information or specification advice on Portland Cement and the full range of Lafarge Emirates' products can be obtained through the contacts listed below.

Other Cements

Lafarge Emirates Cement also manufactures:

- Portland Limestone Cement (PLC)
- Sulfate-Resisting Portland Cement (SRPC)
- Moderate Sulfate Resisting Cement (MSRC)
- Ground Granulated Blast-furnace Slag (GGBS)

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LAFARGE

ALMAS Super CEMENT

LAFARGE
EMIRATES
CEMENT

ALMAS Super

Portland Cement

CEM II/A-L 42,5R

Lafarge Emirates' ALMAS Super can be used in wide range of applications including these that require high quality finishing along with high strength. **ALMAS Super** meets or exceeds all applicable chemical and physical requirements of BS EN 197-1 for CEM II / A-L.

Applications

ALMAS Super is ideal for general purpose use in a wide range of applications: Majority of concrete products, general purpose ready-mix concrete, concrete block making, mortar for joining block, plaster/render, tile bed mortar, floor screeds, grout etc.

Features & Benefits

High Strength: Strength class of ALMAS Super is 42.5R. It attains easily high strength (20-30 MPa) in 2 days & up to 48 MPa in 28 days.

Reduced Bleeding: Tendency of bleeding of fresh concrete significantly reduces for concrete made with ALMAS Super.

Enhanced Cohesiveness for concrete & **better stickiness** for mortar thereby resulting in less material wastage.

Better Surface Finish: Due to bleeding, smoother & brighter appearance for plastering / finishing work that reduces wall putty consumption.

Reduced Pigment Consumption: Paler colour of ALMAS Super helps to reduce pigment consumption for coloured mortar / concrete thereby saving cost.

Wide Range of Applications: ALMAS Super can be used in most applications including finishing applications like plaster / render. ALMAS Super is equally suitable for making general grade concrete.

Green Building Material: Use of this product is a step forward to the sustainable construction practices.

Requirements of BS EN 197-1 standard are compared to typical performance data for Lafarge Emirates' ALMAS Super in the table.

A member of LafargeHolcim

Requirements of standard & typical properties of Lafarge Emirates' ALMAS Super:		
Property	**Requirement of BS EN 197-1 for CEM II / A – L 42,5 R**	**Typical values* of ALMAS Super**
Sulfate (as SO_3)	Maximum 4.00 %	2.00 – 2.80 %
Chloride	Maximum 0.10 %	0.01 – 0.05 %
Compressive Strength: 2 days	Minimum 20.0 MPa	20 – 23 MPa
Compressive Strength: 7 days	---	33 – 37 MPa
Compressive Strength: 28 days	Minimum 42.5 MPa	43 – 46 MPa
Initial Setting Time	Minimum 60 minutes	140 – 190 minutes
Final Setting Time	---	200 – 250 minutes
Soundness	Maximum 10 mm	0.00 – 2.00 mm
**Values obtained from tests as per BS EN standards.*		

Admixture additions: It is recommended to carry out trial mixes to verify admixture compatibility with ALMAS Super & to find out the optimum admixture dosage.

Test Certificates: Routine product test data covering the key physical and chemical parameters are made available on weekly basis on request.

Availability: ALMAS Super is supplied both in bulk tanker & 50 kg bag.

Storage: Cement should be stored dry to avoid its quality deterioration due to premature hydration and carbonation. Moisture from the air can be as harmful as direct moisture. Cement in bulk should be stored in well maintained silo with no damp air or moisture ingress. Bags should be stored unopened and clear off the ground in dry conditions and should be stacked in a safe and stable manner.

Health and Safety	Technical Support	Product Range
Contact between cement powder and body fluids (e.g. sweat & eye fluids) may cause irritation, dermatitis or burns. Wear suitable protective clothing, dust mask, protective goggles, gloves while handling. Immediately wash with plenty of clean water when it comes in contact with eye or skin. Seek immediate medical advice for persistent or severe discomfort.	Further information or specification advice on ALMAS Super and the full range of Lafarge Emirates' products can be obtained through the contacts listed below.	- Portland Cement (OPC) - Sulfate-Resisting Portland Cement (SRPC) - Moderate Sulfate Resisting Cement (MSRC) - Ground Granulated Blast-furnace Slag (GGBS)

CERTIFIED COMPANY ISO 9001:2008

ECO FRIENDLY

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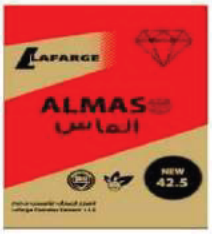


Quality Test Certificate

Portland Cement BS EN 197-1 : 2011 - CEM II/A-L 42,5 R
BS EN 197-1 اسمنت بورتلاندى مطابق للمواصفات البريطانية/الاوروبية

Week No.:	**24/2016**	**Date of Issue:**	**19-Jul-2016**
Dispatch Period:	**12-Jun-2016 to 18-Jun-2016**	**Ref. No.:**	**LEC/PC-AI/16. 24**

ALMAS

Chemical Composition - Test Method BS EN 196-2:2005

				Standard Requirements	
Silicon Dioxide	SiO_2	17.94	%	--	
Aluminum Trioxide	Al_2O_3	4.43	%	--	
Ferric Oxide	Fe_2O_3	3.13	%	--	
Calcium Oxide	CaO	62.80	%	--	
Magnesium Oxide	MgO	1.18	%	--	
Potassium Oxide	K_2O	0.49	%	--	
Sodium Oxide	Na_2O	0.24	%	--	
Sulfate	SO_3	2.21	%	3.5%	Max.
Chloride	Cl	0.023	%	0.10%	Max.
Insoluble Residue	IR	1.10	%	--	
Tricalcium Aluminates	C_3A	6.46	%	--	

Physical and Mechanical Properties

Compressive Strength - Test Method BS EN 196-1:2005

		Standard Requirements	
2 Days (Mpa)	26.0	20.0 (Mpa)	Min.
7 Days (Mpa)	40.8	--	
28 Days (Mpa)	49.9	42.5 (Mpa)	Min.

Setting Time -Test Method BS EN 196-3:2005

			Standard Requirements	
Initial Time (minutes)	150		60 minutes	Min.
Final Time (minutes)	200		--	
Standard Consistency	28.0	%	--	

Soundness -Test Method BS EN 196-3:2005

		Standard Requirements	
Expansion (mm)	1.00	10.0 mm	Max.

Fineness by Blaine -Test Method BS EN 196-6:1992

		Standard Requirements
Specific Surface area (cm^2/g)	4505	--

We certify that the above test results conform to the standard requirements as stated above at the time of dispatch of the cement from our

Approved by

Mohammed Hassan Ibrahim
Head of Optimization Department

Idn, Habhab, 1141. Fujairah-UAE, Tel: +971 (7) 2044777, Fax: +971 (7) 2448719

This Test Results sheet is softcopy approved and does not require any signature
هذه الشهادة موقعة الكترونيا, ولا تحتاج توقيع

LABORATORY REPORT OF PORTLAND CEMENT
(BS EN 197-1:2011)

Lafarge Emirates Cement
P.O. Box 1141
Ras Al Khaimah, U.A.E.

Report No: WLPR15-19263/10
Sample No: WSP15-19263
Report Date: 10/01/2016

Introduction: Further to the request received from **M/s. Lafarge Emirates Cement** dated 25th of November 2015, to test a sample of Portland cement CEM II/B-L 42.5N for physical analysis.

Sample description : **Portland cement CEM II/B-L 42.5N**
Sample Date Received : **25/11/2015**
Tested Date : **26/11/2015-28/12/2015**
Tested By : **PK**

Physical Analysis

PHYSICAL PROPERTIES		Method	Unit	Specification limits	Results
1	Specific surface (Blaine)	BS EN 196-6	m^2/kg	-	400
2	Standard Consistency	BS EN 196-3	%	-	27
3	Setting time (Vicat Method) Initial (Minutes) Final (Minutes)	BS EN 196-3	minutes	Min. 75	 150 225
4	Soundness by Lechateliar Method	BS EN 196-3	mm	Max. 10	2.0
5	Compressive Strength (a) 2 days (b) 7 days (c) 28 days	BS EN 196-1	N/mm^2	 Min. 10.0 - Min. 42.5	 23.9 37.5 46.8

Chemical Analysis

Test	Method	Unit	Result
Loss on Ignition		%	8.56
Insoluble Residue		%	0.35
Silicon Dioxide (SiO_2)	BS EN-196	%	18.32
Aluminium Trioxide (Al_2O_3)		%	4.84
Ferric Oxide (Fe_2O_3)		%	3.16
Calcium Oxide (CaO)		%	63.16
Magnesium Oxide (MgO)		%	1.43
Sodium Oxide (Na_2O)		%	0.22
Potassium Oxide (K_2O)		%	0.59
Chloride		%	0.03
Sulphur Trioxide (SO_3)		%	2.63
Tri calcium Aluminate		%	7.47
Total Alkalis as Na_2O		%	0.61

Signed for and on behalf of Wimpey Laboratories

Binu K. Babu
Technical Manager

-End of text-

الامارات العربية المتحدة • دبي • ص.ب : ١٢٣٢٧٩ • فاكس : ٣٢٠٤٧١٨ ٤ ٩٧١+ • تليفون : ٣٢٠٤٧١٧ ٤ ٩٧١+
TEL : +971 4 3204717 • FAX: +971 4 3204718 • P.O.BOX : 123279 • DUBAI • UNITED ARAB EMIRATES
الامارات العربية المتحدة • أبو ظبي • ص.ب : ١١٥٠٨٦ • فاكس : ٢٥٥٠٣٣٨٧ ٢ ٩٧١+ • تليفون : ٢٥٥٠٣٣٢٤ ٢ ٩٧١+
TEL: +971 2 5503324 • FAX: +971 2 5503387 • P.O.BOX: 115086 • ABU DHABI • UNITED ARAB EMIRATES
E-mail: info.dubai@wimpeylab.com Website: www.wimpeylab.com

List of projects to which concrete was supplied using Lafarge Emirates's Cement

Project	Contractor	Consultant / Client	Concrete Supplied by
Ali Multi use Complex Novotel Project	Dutco Balfour Beatty	Consultant - Khatib & Alami	Ready-mix Gulf
Ritz Carlton Dubai Expansion	Khansaheb Civil Engg.	Consultant - Rice Perry Ellis	Ready-mix Gulf
Jumeirah Lake Towers	Al Ahamdiah Contracting	Consultant - National Engg. Bureau	Ready-mix Gulf
Regal Tower at Business Bay	Dubai Contracting Co.	Consultant - Architecnic International	Ready-mix Gulf
Sharjah Sewage Treatment Plants	Six Construct Ltd.	Consultant - Halcrow	Ready-mix Gulf
Al Salam Tower at Dubai	--	--	Ready Mix Beton, ACC
Cleveland Hospital at Abu Dhabi	--	--	Ready Mix Abu Dhabi
Adnoc Tower at Abu Dhabi	--	--	Unibeton
Al Saleh Housing Project, Abu Dhabi	--	--	Rak Precast
Shaikh Zaid Housing Project	--	--	Gulf Concrete & Block, Wel mix
Integrated Gas Development Project	Hyundai Heavy Industries	Client - ADGAS	Ras Laffan Precast Project
Das Island Development – Phase III	Van Oord	Client - ADNOC	Ras Laffan Precast Project
Zakum Artificial Islands	Van Oord	Client - ADNOC	Ras Laffan Precast Project
Dubai Fujeirah Freeway	National Wheel J & P	Client - Ministry of Public Works & Housing	Sijimix
R-405, Daftah - Shis Road & Tunnel	General Mechanic Company	Client - Govt. of Sharjah, Directorate of Public Works	Sijimix
Novotel & Ibis Hotels & Service Apartment	FNCT Contracting Co	Client - Fujeirah National Group	Sijimix
Royal Hanger	FNCT Contracting Co	Client - Fujeirah International Airport	Sijimix
ADCOP Abu Dhabi Crude Oil Pipeline Bridges Project	China Harbour Engineering Co. (SJH) LLC	Client - China Petroleum Engineering & Const. Corp.	Sijimix
Strategic Grain Reserve	China Harbour Engineering Co. (SJH) LLC	Client - Abu Dhabi Investment Company	Sijimix
Fujeirah Commercial Complex, Haleefat Fujeirah	Commodore Contracting Co. LLC		Orimix Concrete Products LLC
Sheikh Zyed Islamic Centre, Fujeirh	United Engineering Construction(UNEC) LLC		Orimix Concrete Products LLC
B + G + M + 8 Type + 2Roof Level Hotel, Gufa Fujeirah	Al Shafar Contracting Co. LLC		Orimix Concrete Products LLC
New Conveyor Belt Aggregates Sea Port, Fujeirah	Fujeiraj Seng Construction LLC		Orimix Concrete Products LLC
Projects in Marjan Island	--	--	Wel Mix Concrete (Dubai) LLC
Al Falah Community Development : Villas for Village 2 & 3	EL Seif Engineering Contracting		Quick Mix Beton LLC
Al Bustan Mixed Use Development (Plot C1, Sec E 35, Abu Dhabi)	Al Habtoor Engineering		Quick Mix Beton LLC
Gulf Hotel - JW Marriot (Site 276) Abu Dhabi & SPA, Abu Dhabi	Al Habtoor Engineering		Quick Mix Beton LLC
Arzanah Medical Complex, Abu Dhabi (Site 280)	Al Habtoor Engineering		Quick Mix Beton LLC
EREC Building No 20 for Ministry of Finance	Dhabi Contracting		Quick Mix Beton LLC

PROJECT:	EMPLOYER:	REF.:
DEIRA MALL	NAKHEEL	UNEC/J290/MAS/70/REV 0
CONTRACT NO.:	CONTRACTOR : UNEC	YOUR REF:
ENGINEER : RSP TEC JACOB ENGINEERING GROUP na		DATE: 27-May-18

SUBMITTAL FOR APPROVAL OF MATERIALS

1. MATERIAL DESCRIPTION (one item only on this form) :
ALTERNATIVE SUPPLIER: PORTLAND CEMENT (CEM I, CEM II) 42.5N
NOTE: SUPERSEDES UNEC/J290/MAS 34 rev 0 and UNEC/J290/MAS 35 rev 0.

Area of Application : various
Drawing Ref. : various — B.O.Q. Ref. No. : various
Specification Ref. : 33000,33500, 34000 — Standards : -

Attach all relevant technical literature marked to identify relevant description, current Test Certificates, samples as appropriate.

2. MANUFACTURER/SUPPLIER :
Company Name : M/s Lafarge, M/s Rak Cement, M/s Union Cement, M/s Gulf Cement,
Address : PO box 99745 Dubai, PO Box 2499 RAK, PO box 170 RAK, PO box 5295 RAK
Local Agent : M/S HUB TEC BUILDING MATERIALS

3. DELIVERY :
Country of Origin : DUBAI/ RAK

Availability: (●) Locally Manufactured ( ) Overseas

Delivery : Ex-works/ Total Duration [ ] [ ]
Estimated Time of Arrival on Site [ ]

Program : Date Material Required on Site [ ]
Latest Date for Order [ ]

We certify that the above submitted items have been reviewed in detail and are correct and in strict conformity with the contract drawings and specifications except as otherwise stated; also that the material sources indicated above have been reviewed in detail and that they will supply the submitted items in conformity with the above and deliver same timely.

Requested by:	FOR SUB-CONTRACTOR		FOR MAIN-CONTRACTOR	
	NAME/SIGNATURE	DATE:	NAME/SIGNATURE	DATE:
Checked by QA/QC:				27/05/218
Checked by CM/PM:				27/05/2018

4. ERA'S CONSULTANT COMMENTS :

TECH.- * TEST RESULTS FROM DM APPROVED LABORATORY TO BE SUBMITTED PRIOR TO USE.
* PROJECT SPECIFICATION & TRAKHEES REQUIREMENT TO BE COMPLIED.
* ANY REJECTION OF THE MATERIAL IN THE ABSENCE OF TEST REPORT WILL BE CONTRACTOR'S RESPONSIBILITY.

- [ ] Approved
- [ ] Approved As Noted ✓
- [ ] Revise and Resubmit
- [ ] Rejected

Signature TECH SER / AOR — DATE 07/06/18 — 10.06.18

CLIENT:

No objection subject to compliance with local laws.

- [ ] Approved
- [ ] Approved As Noted
- [ ] Revise and Resubmit
- [ ] Rejected

Signature — DATE 18/6/18

CONTRACTOR:

RESPONSE RECEIVED BY: SIGNATURE: DATE: 27 MAY 2018 RECEIVED

Approval shall not relieve Contractor of his liabilities under the Contract or constitute authorization of any change to Contract Documents.

DISTRIBUTION: ☑ RSP — RECEIVED 19 JUN 2018 BY .....

MH

The Towers FZ - LLC	GS	

Proposed Building (3B+G+21+Roof)
Plot No. IMPZ.K.15 at Me'Aisem First Dubai, UAE

CLIENT	CONSULTANT	CONTRACTOR
THE TOWERS FZ - LLC	GOLDEN SQUARE ENGINEERING CONSULTANTS	MODERN BUILDING CONTRACTING COMPANY

REF NO	PRE-QUALIFICATION SUBMITTAL	DATE
SC/IMPZ/PQ/0005		23-May-18

Sub contractor Name & Stamp	Contract Ref
HUB TEC Building Materials	

Scope of Work

Civil Material Works

Item Description:	Pre-Qualification Document	
Supplier / Manufacturer:		
Engr. Loai Sommad Contractor's Name & Stamp	23/05/2018 Contractor's Sign & Date	23 MAY 2018 RECEIVED Consultant's Receipt Sign & Date

GS GOLDEN SQUARE ENGINEERING CONSULTANTS

For Consultant's use

The above submittal is: o Approved ✓ Approved as Noted o Resubmit o Rejected

Comments

(1) Delivered material should be complied with DM requirement.

(2) Test certificates are to be provided for all type of materials

(3) Materials are to be used should be complied with the project requirement and specifications.

Engr. Alaa Faiq	27/5/2018	28.05.18
Name,Sign, Date & Stamp Resident Engineer	Name,Sign & Date Discipline Engineer	Name,Sign, Date & Stamp Contractor Receiving

ABOUT US

RAK


RAS AL KHAIMAH CEMENT COMPANY
اسمنت پورتلاندی
50 کیلو جرام
RAKCC
ISO 9001:2008 CERTIFIED COMPANY
UNITED ARAB EMIRATES
PORTLAND CEMENT
EN 197-1 CEM I 42.5 N/R 50 KG.
SEAL OF
www.rakcc.ae

CONTRACT:	CLIENT:
F1003 KIFAF DEVELOPMENT - PHASE I, PLOT NO. 324-6457 SHEIKH ZAYED ROAD DUBAI, U.A.E.	PARK 1 LLC (Wasl - represened by wasl LLC)
CONSULTANT: ARCHGROUP	**CONTRACTOR:** KELE CONTRACTING LLC

MATERIAL APPROVAL SHEET

MAS Ref. : MAS/KIFAF/007 **Rev:** 0 **Date:** 18-July-17

Item : RAK OPC Cement

Supplier: HubTec Bldg Materials Manufacturer : RAK OPC Cement

Date on which required at site: As per Requirement

BOQ Ref: BS Ref:

Spec.Ref: Section E - 3 Sample attached: Yes ☐ No ■

Compliance Statement attached: Yes ☐ No ■

Drg Ref: Certificate Attached: Yes ■ No ☐

Assurance of

Delivery on time: Yes ■ No ☐

Remarks:

CONTRACTOR:

Name / Signature: Mr. Leslie Fairchild / Sr. Project Manager Date:

ENGINEER:

Above Information given by Contractor is Correct Yes ☐ No ☐

Required information 1

2

3

Material Recommended ☑ / Rejected ☐

Recommendation with Comments: *ENSURE DUBAI MUNICIPALITY REGULATIONS COMPLIANCE TO USE PROPOSED PRODUCTS IN DUBAI EMIRATE

Name/Signature: SHAJI KURIAN Date: 26-07-17

EMPLOYER:

Material Recommended ☐ / Rejected ☐

Approved with additional comments

Comments: 1

2

3

Name/Signature: Date:

RAS AL KHAIMAH CEMENT COMPANY

P.O.BOX 2499 : RAS AL KHAIMAH
UNITED ARAB EMIRATES

TEST CERTIFICATE

PORTLAND CEMENT
EN 197-1 - CEM I 42.5 N/R
(ISO 9001:2008 CERTIFIED COMPANY)

S.No.	PARTICULARS	REQUIREMENTS	RESULTS
	CHEMICAL COMPOSITION		
1	Loss on Ignition (L.O.I.) (%)	Max. 5.0	2.48
2	Insoluble Residue (I.R.) (%)	Max. 5.0	0.36
3	Sulfate content (SO_3) (%)	Max. 3.5	2.48
4	Total Alkali as Na2O (%)		0.56
5	Chloride (Cl) (%)	Max.0.10	0.020
6	Tricalcium Aluminate (C_3A) (%)		7.25
	PHYSICAL PROPERTIES		
1	Specific Surface (Blaine) (cm^2/gm)		3595
2	Setting Time (Vicat method)		
	Initial (Minutes)	Min. 60	170
	Final (Minutes)		200
3	Soundness by Le chatelier method (mm)	Max. 10	0.0
4	Compressive Strength (N/mm^2)		
	(a) 2 Days	Min. 10	21.9
	(b) 7 Days		36.1
	(c) *28 Days	Min. 42.5 & Max.62.5	47.1

Remarks : * 28 Days Strength of Week No.09(2018)

** Cement conforms the Specification for Portland Cement EN 197-1 -CEM I 42.5 N & R

Week No.12/2018 (17-03-18 to 22-03-18)

Date - 1-Apr-18

Head of QA,QC 31/04/18

Ref: RAKCC-P08/R16 Issue.02 Date: Dec.28, 2017 Page 1 of 1

Ras Al Khaimah Cement Co. PLC

RAS AL KHAIMAH CEMENT COMPANY

PO Box 2499, Ras Al Khaimah.
United Arab Emirates.
Phone. + 971 7 2660111. Fax. + 971 7 2660183.

Material Safety Data Sheet

Portland Cement

Product Name	: Portland Cement
Other Names	: Ordinary Portland Cement (OPC) General Purpose Cement
Product Use	: Portland cement is used as binders in a range of applications including concrete, mortars, renders and grouts. Cement is distributed in bags and bulk shipment.

PHYSICAL PROPERTIES

Appearance and colour	: Fine powder grey in colour. No odour.
Boiling Point / Melt Point	: Not Applicable
Vapour Pressure	: Not applicable
Specific Gravity	: 3.0 to 3.15
Solubility in water	: Insoluble, Hardens on mixing with water.

FIRE AND EXPLOSION HAZARD INFORMATION

Flash point	: Not applicable
Flammability	: Non combustible
Other properties	: Not explosive.

CHEMICAL DESCRIPTION

Tricalcium silicate ($3CaO.SiO_2$) and Dicalcium silicate ($2CaO.SiO_2$) are the essential constituents, along with Alumina as Tricalcium aluminate and Iron oxide as Tetra calcium Aluminoferrate. Small amounts of Magnesia, Sulphur trioxide, Sodium oxide, and Potassium oxide are also present.

HEALTH HAZARD INFORMATION

HEALTH EFFECTS

Swallowed: Mild corrosive action.

Eye: Short-term exposure, irritating. Long-term exposure, irritating may cause inflammation of the cornea.

Skin: Short-term exposure, irritating. Long-term exposure, wet cement, especially as an ingredient in plastic (unhardened) concrete, mortar or slurry, is slightly caustic and can dry the skin. There are also trace amounts of water-soluble hexavalent chromium present in cement and in some individuals may cause allergic dermatitis.

Inhaled: Short-term exposure, irritating. Long-term exposure may cause inflammation of lining of the respiratory system.

FIRST AID

Swallowed: Brush material from face and wash with copious amounts of clean water. Do not induce vomiting, give water containing sugar or milk to drink. Seek medical assistance.

Skin : Remove contaminated shoes and clothing. Wash affected area with clean water followed by soap and water then apply oil. Seek medical assistance if necessary.

Eyes: Immediately flush eyes with large amount of clean running water for at least 15 minutes. Do not rub eyes. Seek medical assistance.

Inhaled: Move to fresh air. If breathing is difficult, give oxygen; if victim is not breathing, give artificial respiration. Seek medical assistance if necessary.

PRECAUTIONS FOR USE

Exposure Limits: Cement is classified as an inert nuisance dust.

Wet cement, particularly in plastic (unhardened) concrete, mortar or slurry, can dry the skin and cause alkali burns. Continued exposure to individuals who are allergic to chromium, may cause severe allergic dermatitis.

Ventilation: Where practical, suitable means of dust collection / suppression should be applied as necessary to maintain acceptable air borne dust levels.

Persons with a history of respiratory illness or reduced pulmonary function should avoid work places with high dust levels.

Personal Protection: In dust environments, the use of filter masks and tight fitting goggles is advised.

Use of impervious gloves, boots and clothing to protect the skin from contact with dust and wet cement is recommended. Barrier creams/oils may also be used.

Following work with cement, a shower with soap and water and apply oil. Jaggary intake will be helpful in cleaning the lungs channel to remove the dust if any.

Flammability: Cement is non-combustible.

SAFE HANDLING INFORMATION

Handling and Storage : Cement should be stored away from moisture, steam, acid or acid fumes, in containers that prevent ingress of moisture as this will cause it to set and hardened in storage.

Concrete or steel bins and silos or plastic lined paper sacks are the most usual forms of storage.

Transportation is usually in bulk road tankers, ships, in paper sacks or jumbo bags.

Spills and Disposals : Notify safety personnel of large leaks. Spills may be cleaned up by any dry method such as, broom, shovel or vacuum device, with care taken to minimise dust evolution into the work environment.

Clean up personnel should wear full cover clothing, gloves, boots, dust masks and goggles.

Carefully dispose of excess product and packaging by collecting for disposal as a trade waste in accordance with local regulations.

Disclaimer: *The provision of this information is provided for use in assessing the hazardous nature of the material. Users are advised to make their own determination as to the suitability of this information in relation to their particular purposes and specific circumstances. Users should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace and in conjunction with other substances or products.*

Projects in United Arab Emirates - Utilizing Ras Al Khaimah Cement

Project Name	Emirate	Description of Project
Burj Khalifah	Dubai	Worlds Tallest Tower
Palm Jumairah	Dubai	Offshore Housing Project
Palm Jebel Ali	Dubai	Offshore Housing Project
City of Arabia	Dubai	Shopping and Housing Project
Index Tower	Dubai	Multi - Story Commercial Tower
Business Bay	Dubai	Water Canal and Associated Ground Works
NPC Orascom	Abu Dhabi	Multi Story Commercial Tower
Dubai Health Care City	Dubai	Hospital and Accommodation Complex
Jumairah Beach Residence	Dubai	18 Multi Story Accommodation Towers
Ras Al Khour Crossing	Dubai	Multi Lane Bridge Crossing
Watt Hotel Complex	Dubai	Shopping and Hotel Complex
Twin Towers	Dubai	48 Story Twin Tower
Sea Palace (Qasral Bahar)	Abu Dhabi	Five Star hotel
Yas Police Station project	Abu Dhabi	Offices
Hydra advance Tower	Abu Dhabi	Multi - Stop CoouoerciaJ Tower
City of light project	Abu Dhabi	13 building including one commercial Tower
AI Raha Garden	Abu Dhabi	Offshore Housing Project
Najmat Reem Island	Abu Dhabi	Array of residential, retail, commercial and leisure projects
AI Watani villa project	Abu Dhabi	Emirates Housing project
Institute of Applied Technology	Abu Dhabi	Education building
Shams Abu Dhabi Tower	Abu Dhabi	Multi - Story Commercial Tower
Deerfields Town Square mall	Abu Dhabi	Entertainment family centre
Sorouh Commercial Building	Abu Dhabi	Commercial Buildings

KHOR KHWAIR
Tel. : (971 7)2660111 - Fax : (971 7) 2660044
P.O. Box : 2499 - Ras Al Khaimah - U.A.E.
E-mail : rakcc@rakcc.ae
ISO 9001 : 2008 CERTIFIED
Website : www.rakcc.ae
خور خوير
هاتف : ٢٦٦٠١١١ - (٧ ٩٧١) - فاكس : ٢٦٦٠٠٤٤ - (٧ ٩٧١)
ص.ب : ٢٤٩٩ - رأس الخيمة - إ.ع.م.
البريد الإلكتروني : rakcc@rakcc.ae

PROJECT:	EMPLOYER:	REF.:
DEIRA MALL	NAKHEEL	UNEC/J290/MAS/70/REV 0
CONTRACT NO.:	CONTRACTOR : UNEC	YOUR REF:
ENGINEER : RSP — TED JACOB ENGINEERING GROUP — na		DATE: 27-May-18

SUBMITTAL FOR APPROVAL OF MATERIALS

1. MATERIAL DESCRIPTION (one item only on this form) :
ALTERNATIVE SUPPLIER: PORTLAND CEMENT (CEM I, CEM II) 42.5N
NOTE: SUPERSEDES UNEC/J290/MAS 34 rev 0 and UNEC/J290/MAS 35 rev 0.

Area of Application : various
Drawing Ref. : various — B.O.Q. Ref. No. : various
Specification Ref. : 33000,33500, 34000 — Standards : -

Attach all relevant technical literature marked to identify relevant description, current Test Certificates, samples as appropriate.

2. MANUFACTURER/SUPPLIER :
Company Name : M/s Lafarge, M/s Rak Cement, M/s Union Cement, M/s Gulf Cement,
Address : PO box 99745 Dubai, PO Box 2499 RAK, PO box 170 RAK, PO box 5295 RAK
Local Agent : M/S HUB TEC BUILDING MATERIALS

3. DELIVERY :
Country of Origin : DUBAI/ RAK

Availability: (◉) Locally Manufactured ( ) Overseas

Delivery : Ex-works/ Total Duration [ ] [ ]
Estimated Time of Arrival on Site [ ]

Program : Date Material Required on Site [ ]
Latest Date for Order [ ]

We certify that the above submitted items have been reviewed in detail and are correct and in strict conformity with the contract drawings and specifications except as otherwise stated; also that the material sources indicated above have been reviewed in detail and that they will supply the submitted items in conformity with the above and deliver same timely.

Requested by:	FOR SUB-CONTRACTOR		FOR MAIN-CONTRACTOR	
	NAME/SIGNATURE	DATE:	NAME/SIGNATURE	DATE:
Checked by QA/QC:				27/05/218
Checked by CM/PM:				27/05/2018

4. ERA'S CONSULTANT COMMENTS :

TECH! - * TEST RESULTS FROM DM APPROVED LABORATORY TO BE SUBMITTED PRIOR TO USE.
* PROJECT SPECIFICATION & TRAKHEES REQUIREMENT TO BE COMPLIED.
* ANY REJECTION OF THE MATERIAL IN THE ABSENCE OF TEST REPORT WILL BE CONTRACTOR'S RESPONSIBILITY.

☐ Approved
☐ Approved As Noted ✓
☐ Revise and Resubmit
☐ Rejected

Signature TECH SRE / AOR DATE 27/06/18 10.6.18

CLIENT:

No objection subject to compliance with local laws.

☐ Approved
☐ Approved As Noted
☐ Revise and Resubmit
☐ Rejected

Signature DATE 18/6/18

CONTRACTOR:

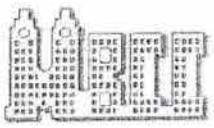
RESPONSE RECEIVED BY: SIGNATURE: DATE: 27 MAY 2018

Approval shall not relieve Contractor of his liabilities under the Contract or constitute authorization of any change in Contract Documents.

RECEIVED 19 JUN 2018 BY

DISTRIBUTION: ☑ RSP

MH

The Towers FZ - LLC	GS	

Proposed Building (3B+G+21+Roof)
Plot No. IMPZ.K.15 at Me'Aisem First Dubai, UAE

CLIENT	CONSULTANT	CONTRACTOR
THE TOWERS FZ - LLC	GOLDEN SQUARE ENGINEERING CONSULTANTS	MODERN BUILDING CONTRACTING COMPANY

REF NO	PRE-QUALIFICATION SUBMITTAL	DATE
SC/IMPZ/PQ/0005		23-May-18

Sub contractor Name & Stamp	Contract Ref
HUB TEC Building Materials	

Scope of Work

Civil Material Works

Item Description:	Pre-Qualification Document	GS جولدن سكوير للاستشارات الهندسية GOLDEN SQUARE ENGINEERING CONSULTANTS
Supplier / Manufacturer:		
Engr. Loai Sommad Contractor's Name & Stamp	23/05/2018 Contractor's Sign & Date	23 MAY 2018 RECEIVED (3B+G+21+R) Building No. IMPZ.K At Me'Aisem First, Dubai, UAE Consultant's Receipt Sign & Date

For Consultant's use

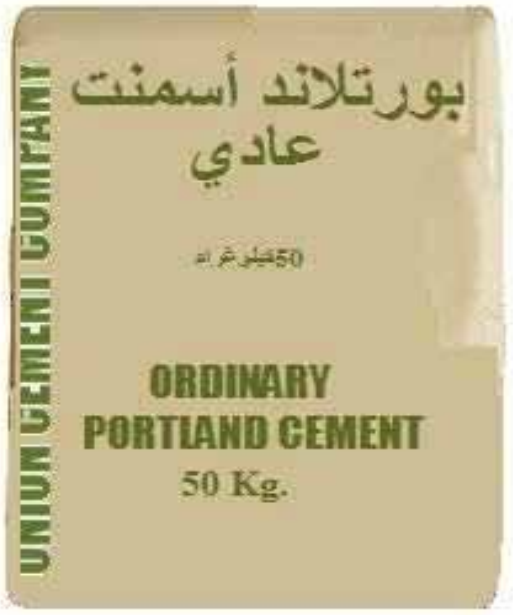
The above submittal is: o Approved o Approved as Noted o Resubmit o Rejected

Comments

1. Delivered material should be complied with DM requirement.
2. Test certificates are to be provided for all type of materials
3. Materials are to be used should be complied with the project requirement and specifications.

Engr. Alaa Faiq Name,Sign, Date & Stamp Resident Engineer	27/5/2018 Name,Sign & Date Discipline Engineer	28.05.18 Name,Sign, Date & Stamp Contractor Receiving

UNION



شركة اسمنت الاتحاد (ش.م.ع)
UNION CEMENT COMPANY (P.S.C.)

Tuesday, June 27, 2017

QUALITY CERTIFICATE
ORDINARY PORTLAND CEMENT
EN 197-1:2011, CEM I, Class 42.5 N

PRODUCTION TEST RESULTS : WEEK - 24 -2017

DESCRIPTION & PARTICULARS		REQUIREMENTS	RESULTS
CHEMICAL ANALYSIS :			
Silicon Dioxide (SiO2) %		---	19.69
Aluminium Oxide (Al2O3) %		---	4.73
Ferric Oxide (Fe2O3) %		---	3.66
Calcium Oxide (CaO) %		---	64.15
Magnesium Oxide (MgO) %		≤ 5.0	1.36
Sulfur Trioxide (SO3) %		≤ 3.5	2.54
Alkalies (Na2O+0.658 K2O) %		---	0.55
Loss On Ignition %		≤ 5.0	3.79
Insoluble Residue %		≤ 5.0	0.56
Tricalcium Silicate (C3S) %		---	51.18
Dicalcium Silicate (C2S) %		---	17.84
Tricalcium Aluminate (C3A) %		---	6.35
Chloride %		≤ 0.10	0.030
PHYSICAL TESTS :			
Fineness, Blaine Test, (m^2/kg)		---	346
Soundness, Expansion mm		≤ 10	1.05
Compressive Strength (MPa) :			
	2days	≥ 10	22.97
	7days	---	36.31
	28days	42.5 to 62.5	49.06
Setting Time, Vicat Test	Initial (Minutes)	≥ 60	175
	Final (Minutes)	---	290

Remarks : 28 days compressive Strength is of Week No. 21

Ref. 573
Code : (CEM I:6,10,12.14&15)

Rafique Arshad	Markus Bernhardt	Qaisar Abbas
ChQC	QAM	PM

UCC/QC /D/051 Revision no.:08 Dec , 2014 Page1 of 1

P.O.Box : 170 - Ras Al Khaimah, U.A.E.
Telephone : 07-2668166 - Sales direct : 07-2668140
Telefax : 07-2668635 - Sales direct : 07-2668313
E-mail : uccrak@emirates.net.ae
Com. Regn. No. 1

ص.ب : ١٧٠ - رأس الخيمة - ا.ع.م.
هـاتف : ٠٧-٢٦٦٨١٦٦ - هـاتف مباشر لقسم المبيعات : ٠٧-٢٦٦٨١٤٠
تليفاكس : ٠٧-٢٦٦٨٦٣٥ - تليفاكس مباشر لقسم المبيعات : ٠٧-٢٦٦٨٣١٣
بريد إلكتروني : uccrak@emirates.net.ae
سجل تجاري رقم :١

			Doc: Mrk-6
Reg: SALES AND MARKETING DEPARTMENT HANDBOOK			Page: 62 of 746
Date: JAN 2014	Revise : 8	Sign: HSS	Approved: MM GM

PORTLAND CEMENT

1. NAME OF THE PRODUCT AND THE COMPANY

Product Name: Ordinary Portland Cement

Manufacturer and Supplier:
Union Cement Company (P.S.C.)
P. O Box 170
Ras Al Khaimah
U.A.E
Tel. +00971 7 2668166/2668140
Fax +00971 7 2668635/2668313
Email: uccrak@emirates.net.ae / uccrak@emirates.net.ae
Website: http://www.uccrak.com

Contact Person: Nanda Koka +971 7 2668140

2. COMPOSITION/CLASSIFICATION OF SUBSTANCES

Substance	CAS #	Content(%)	Class: R-phrases
Portland Cement	65-997-15-1	>95	X R 37/38, 41

3. DANGERUOS CHARACTERISTICS

Health Risks: Irritates respiratory organs and skin. Can cause serious eye injuries.

4. FIRST AID

Inhalation: Fresh, dustless air

Skin Contact/Powder	Brush off and wash with soap and water
Skin contact/Wet Paste	Remove wet clothes, and wash with soap and water
Eye contact	Do not rub! Wash IMMEDIATELY with plenty of water for at least 15 minutes. Contact a hospital or a doctor
Consumption	Drink IMMEDIATELY plenty of water. Do not induce vomiting. Contact a hospital or a doctor
General Information	If in the slightest doubt or persistent complaint, contact a doctor
Storage	Store inaccessible for children and in its original packaging in a dry place

5. PROCEDURES IN CASE OF FIRE

Not relevant since the product is not inflammable

6. PROCEDURES IN CASE OF SPILLAGE/UNINTENTIONAL DISCHARGE

Personal Safety Procedures	Avoid dust. Avoid contact with the skin and eyes
Procedures to protect The environment	Prevent large quantities entering sewage systems, watercourses or small pools of water
Decontamination	

Method	To prevent the formation of dust the cement should be sucked up. Cement mixed with water hardens, and can be disposed off as building paste.

7. HANDLING AND STORAGE

Handling	Avoid the formation of dust
Storage	Store inaccessible for children and in its original packaging in a dry place
On unopened pallet Enclosed in plastic	Approx. 6 months from the date of packing
On opened pallet Enclosed in plastic	Approx. 1 month (no longer than 6 months from the date of packing)

8. LIMITATION OF EXPOSURE/PERSONAL SAFETY PRODECURES

Technical Safety Procedures	Spot extractors may be necessary if there is a risk of inhaling cement dust. This is also applies when grinding and/or drilling in a hardened product. There should be an eye wash facilities on site.
Personal Safety Procedures	Tightly fitting protective glasses and protective gloves. Breathing protection with Filter P2 for solid particles should be used in environments where there is cement dust, and when grinding and/or drilling on a hardened product.

9. PHYSICAL AND CHEMICAL CHARACTERISTICS

Form	Fine-grained, roughly dust forming powder
Colour	Grey
pH in wet solution (kg/m^3)	12.8
Compact density (kg/m^3)	3.1 to 3.2
Bulk density	1.1 to 1.3

10. STABILITY AND REACTIVITY

Stability	The product is a stable product under the recommended storage and handling conditions.
Reactivity	Cement reacts with water and hardens

11. TOXICOLOGICAL INFORMATION

Inhalation	Inhalation of cement dust can irritate mucous membrane
Skin Contact	Prolonged contact (up to 4 hours) with a mixture of cement and water can cause burn injuries on unprotected skin. Can cause allergy (chrome eczema) after repeated contact with the skin

Eye Contact	Dry cement dust or splashing from a mixture of cement and water can quickly result in serious eye injuries.
Consumption	Can result in irritation to oral and digestive organs

12. ECOTOXICOLOGICAL INFORMATION

The product has no known ecotoxicological impact

13. WASTE DISPOSAL

Large quantities of waste can be disposed of in agreement with local authorities. Cement mixed with water hardens and can be disposed of as building waste.

14. TRANSPORT INFORMATION

Cement is not classed as dangerous goods, as per IATA regulation

15. APPLICABLE REGULATION

X	Irritating
R37/38	irritates respiratory organs and the skin
R41	Can result in serious eye injuries
R43	Can result in allergy (on skin contact)

Stored inaccessible for children and its original packaging
Contains more than 50 percent by weight Portland Cement
Calcium hydroxide is formed on contact with water, which is an irritant to the skin.

PROJECT: DEIRA MALL	EMPLOYER: NAKHEEL	REF.: UNEC/J290/MAS/70/REV 0
CONTRACT NO.:	CONTRACTOR : UNEC	YOUR REF:
ENGINEER : RSP TEC JACOB ENGINEERING GROUP na		DATE: 27-May-18

SUBMITTAL FOR APPROVAL OF MATERIALS

1. MATERIAL DESCRIPTION (one item only on this form) :
ALTERNATIVE SUPPLIER: PORTLAND CEMENT (CEM I, CEM II) 42.5N
NOTE: SUPERSEDES UNEC/J290/MAS 34 rev 0 and UNEC/J290/MAS 35 rev 0.

Area of Application : various
Drawing Ref. : various   B.O.Q. Ref. No. : various
Specification Ref. : 33000,33500, 34000   Standards : -

Attach all relevant technical literature marked to identify relevant description, current Test Certificates, samples as appropriate.

2. MANUFACTURER/SUPPLIER :

Company Name : M/s Lafarge, M/s Rak Cement, M/s Union Cement, M/s Gulf Cement,
Address : PO box 99745 Dubai, PO Box 2499 RAK, PO box 170 RAK, PO box 5295 RAK
Local Agent : M/S HUB TEC BUILDING MATERIALS

3. DELIVERY :

Country of Origin : DUBAI/ RAK

Availability
(●) Locally Manufactured   ( ) Overseas

Delivery : Ex-works/ Total Duration [ ] [ ]
Estimated Time of Arrival on Site [ ]

Program : Date Material Required on Site [ ]
Latest Date for Order [ ]

We certify that the above submitted items have been reviewed in detail and are correct and in strict conformity with the contract drawings and specifications except as otherwise stated; also that the material sources indicated above have been reviewed in detail and that they will supply the submitted items in conformity with the above and deliver same timely.

Requested by:	FOR SUB-CONTRACTOR		FOR MAIN-CONTRACTOR	
	NAME/SIGNATURE	DATE:	NAME/SIGNATURE	DATE:
Checked by QA/QC:			[signature]	27/05/218
Checked by CM/PM:				27/05/2018

4. ERA'S CONSULTANT COMMENTS :

TJEG! - * TEST RESULTS FROM DM APPROVED LABORATORY TO BE SUBMITTED PRIOR TO USE.
* PROJECT SPECIFICATION & TRAKHEES REQUIREMENT TO BE COMPLIED.
* ANY REJECTION OF THE MATERIAL IN THE ABSENCE OF TEST REPORT WILL BE CONTRACTOR'S RESPONSIBILITY.

- [ ] Approved
- [x] Approved As Noted
- [ ] Revise and Resubmit
- [ ] Rejected

Signature TJEG [signature] SRR AOR   DATE 07/06/18   [signature] 10.06.18

CLIENT:

No objection subject to compliance with local laws.

- [ ] Approved
- [ ] Approved As Noted
- [ ] Revise and Resubmit
- [ ] Rejected

Signature [signature]   DATE 18/6/18

CONTRACTOR:

RESPONSE RECEIVED BY: SIGNATURE: DATE:

Approval shall not relieve Contractor of his liabilities under the Contract or constitute authorization of any change to Contract Documents.

DISTRIBUTION: [✓] RSP

RECEIVED 19 JUN 2018
BY: ....

27 MAY 2018 RECEIVED

MH

The Towers FZ - LLC	GS	

Proposed Building (3B+G+21+Roof)
Plot No. IMPZ.K.15 at Me'Aisem First Dubai, UAE

CLIENT	CONSULTANT	CONTRACTOR
THE TOWERS FZ - LLC	GOLDEN SQUARE ENGINEERING CONSULTANTS	MODERN BUILDING CONTRACTING COMPANY

REF NO	PRE-QUALIFICATION SUBMITTAL	DATE
SC/IMPZ/PQ/0005		23-May-18

Sub contractor Name & Stamp	Contract Ref
HUB TEC Building Materials	

Scope of Work

Civil Material Works

Item Description:	Pre-Qualification Document	GS GOLDEN SQUARE ENGINEERING CONSULT
Supplier / Manufacturer:		
Engr. Loai Sommad Contractor's Name & Stamp	23/05/2018 Contractor's Sign & Date	23 MAY 2018 RECEIVED Consultant's Receipt, Sign & Date

For Consultant's use

The above submittal is: o Approved o Approved as Noted o Resubmit o Rejected

Comments

1. Delivered material should be complied with DM requirement.
2. Test certificates are to be provided for all type of materials
3. Materials are to be used should be complied with the project requirement and specifications.

Engr. Alaa Faiq Name, Sign, Date & Stamp Resident Engineer	27/5/2018 Name, Sign & Date Discipline Engineer	28.05.18 Name, Sign, Date & Stamp Contractor Receiving

GULF


GULF
Gulf Cement Company
ORDINARY PORTLAND CEMENT 53 Grade
FOR EXPORT
W-50
12/2016
NET 50 KGS
CEMENT

شركة أسمنت الخليج ش.م.ع
Gulf Cement Company P.S.C
شركة مساهمة عامة
Public Shareholding Company
Commercial Reg. No. 2202 سجل تجاري رقم

صناعة نظيفة بيئة مستدامة
Clean Industry - Sustainable Environment

TEST CERTIFICATE

Week No : 02/17 **Date:** 15/02/2017

Period: 08/01/2017 - 14/01/2017

PORTLAND CEMENT CEM I 42,5 N

BS EN 197-1:2011

CHEMICAL COMPOSITION			REQUIREMENTS	RESULTS
Loss on Ignition		(%)	≤ 5.0	1.44
Insoluble Residue		(%)	≤ 5.0	0.32
Silicon Dioxide	(SiO_2)	(%)		20.68
Aluminium Oxide	(Al_2O_3)	(%)		4.89
Ferric Oxide	(Fe_2O_3)	(%)		3.64
Calcium Oxide	(CaO)	(%)		64.05
Magnesium Oxide	(MgO)	(%)		1.41
Sulphur Trioxide	(SO_3)	(%)	≤ 3.5	2.57
Tricalcium Silicate	(C_3S)	(%)		58.2
Dicalcium Silicate	(C_2S)	(%)		15.4
Tricalcium Aluminate	(C_3A)	(%)		6.8
Alkalies	($Na_2O+0.658K_2O$)	(%)		0.60
Chlorides		(%)	≤ 0.10	0.02
PHYSICAL PROPERTIES				
Specific Surface: Air Permeability test		(cm^2/g)		3220
Soundness: Le Chatelier Expansion		(mm)	≤ 10	1.0
Time of Setting : Vicat test				
Initial		(Minutes)	≥ 60	158
Final		(Minutes)		198
Compressive Strength				
2 Days		(N/mm^2)	≥ 10	22.0
7 Days		(N/mm^2)		33.0
28 Days		(N/mm^2)	≥ 42.5 & ≤ 62.5	48.0

We certify that quality of cement conforms to the specifications as stated above.

Chief Chemist

DY.Process Manager

WLB - 051 (11)

Gulf Cement Company P.S.C

P.O. Box : 5295, Ras Al Khaimah
United Arab Emirates

Phone : +971 7 2668222
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E-mail : info@gulfcement.ae
Website : www.gulfcement.ae

ص.ب : 5295 - رأس الخيمة
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الموقع على الإنترنت : www.gulfcement.ae

ISO 9001 : 2008 & ISO 14001 : 2004 CERTIFIED
رأس المال المصرح به والمدفوع: 821,096,820 درهم الإمارات
Authorised and paid up capital : AED 821,096,820

شركة أسمنت الخليج ش.م.ع
Gulf Cement Company P.S.C
شركة مساهمة عامة
Public Shareholding Company
Commercial Reg. No. 2202 سجل تجاري رقم

صناعة نظيفة بيئة مستدامة
Clean Industry - Sustainable Environment

TEST CERTIFICATE

Week No : 02/17 **Date:** 15/02/2017

Period: 08/01/2017 - 14/01/2017

SULFATE-RESISTING PORTLAND CEMENT

BS EN 197-1:2011 CEM I 42,5 N -SR3

CHEMICAL COMPOSITION			REQUIREMENTS	RESULTS
Loss on Ignition		(%)	Max. 5.0	1.25
Insoluble Residue		(%)	Max. 5.0	0.36
Silicon Dioxide	(SiO_2)	(%)		20.70
Aluminium Oxide	(Al_2O_3)	(%)		3.48
Ferric Oxide	(Fe_2O_3)	(%)		4.89
Calcium Oxide	(CaO)	(%)		64.76
Magnesium Oxide	(MgO)	(%)	Max. 5.0	1.46
Sulphur Trioxide	(SO_3)	(%)	Max. 3.0	2.14
Tricalcium Silicate	(C_3S)	(%)		69.8
Dicalcium Silicate	(C_2S)	(%)		6.7
Tricalcium Aluminate	(C_3A)	(%)	Max. 3.0	1.0
Alkalies	($Na_2O+0.658K_2O$)	(%)	Max. 0.60	0.50
Chlorides		(%)	Max. 0.10	0.02

PHYSICAL PROPERTIES			
Specific Surface: Air Permeability test	(cm^2/g)		3310
Soundness: Le Chatelier Expansion	(mm)	Max. 10	1.0
Time of Setting : Vicat test			
Initial	(Minutes)	Min. 60	150
Final	(Minutes)		190
Compressive Strength			
2 Days	(N/mm^2)	>10	23.0
7 Days	(N/mm^2)		34.0
28 Days	(N/mm^2)	≥42.5 & ≤ 62.5	47.0

We certify that quality of cement conforms to the specifications as stated above.

Chief Chemist

DY.Process Manager

WLB - 051 (11)

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Authorised and paid up capital : AED 821,096,820

ص.ب : 5295 - رأس الخيمة
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شركة أسمنت الخليج ش.م.ع
Gulf Cement Company P.S.C
شركة مساهمة عامة
Public Shareholding Company
Commercial Reg. No. 2202 سجل تجاري رقم

صناعة نظيفة بيئة مستدامة
Clean Industry - Sustainable Environment

TEST CERTIFICATE

ASTM C-150-12 TYPE I CEMENT

Week No : 02/17 **Date:** 15/02/2017
Period: 08/01/2017 - 14/01/2017

CHEMICAL COMPOSITION			REQUIREMENTS	RESULTS
Loss on Ignition		(%)	Max. 3.0	1.44
Insoluble Residue		(%)	Max. 0.75	0.32
Silicon Dioxide	(SiO_2)	(%)		20.68
Aluminium Oxide	(Al_2O_3)	(%)		4.89
Ferric Oxide	(Fe_2O_3)	(%)		3.64
Calcium Oxide	(CaO)	(%)		64.05
Magnesium Oxide	(MgO)	(%)	Max. 6.0	1.41
Sulphur Trioxide	(SO_3)			
3 CaO. $Al_2O_3 \leq 8\%$		(%)	Max. 3.0	2.57
3 CaO. $Al_2O_3 > 8\%$		(%)	Max. 3.5	-
Tricalcium Silicate	(C_3S)	(%)		58.2
Dicalcium Silicate	(C_2S)	(%)		15.4
Tricalcium Aluminate	(C_3A)	(%)		6.8
Alkalies	($Na_2O+0.658K_2O$)	(%)		0.60
Chlorides		(%)		0.02

PHYSICAL PROPERTIES			
Specific Surface: Air Permeability test	(M^2/Kg)	Min. 260	322
Autocalve Expansion	(%)	Max. 0.80	0.01
Time of Setting : Vicat test			
Initial	(Minutes)	Min. 45	135
Final	(Minutes)	Max. 375	190
Air Content of Mortar	Vol(%)	Max. 12	6.9
Compressive Strength			
3 Days	(psi)	Min. 1740	3200
7 Days	(psi)	Min. 2760	4100
28 Days	(psi)		5600

We certify that quality of cement conforms to the specifications as stated above.

Chief Chemist

DY.Process Manager

WLB - 051 (11)

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Authorised and paid up capital : AED 821,096,820

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شركة مساهمة عامة
Public Shareholding Company
Commercial Reg. No. 2202 سجل تجاري رقم

TEST CERTIFICATE

ASTM C-150-12 TYPE I CEMENT

Week No : 02/17 **Date:** 15/02/2017
Period: 08/01/2017 - 14/01/2017

CHEMICAL COMPOSITION			REQUIREMENTS	RESULTS
Loss on Ignition		(%)	Max. 3.0	1.44
Insoluble Residue		(%)	Max. 0.75	0.32
Silicon Dioxide	(SiO_2)	(%)		20.68
Aluminium Oxide	(Al_2O_3)	(%)		4.89
Ferric Oxide	(Fe_2O_3)	(%)		3.64
Calcium Oxide	(CaO)	(%)		64.05
Magnesium Oxide	(MgO)	(%)	Max. 6.0	1.41
Sulphur Trioxide	(SO_3)			
3 CaO. $Al_2O_3 \leq 8\%$		(%)	Max. 3.0	2.57
3 CaO. $Al_2O_3 > 8\%$		(%)	Max. 3.5	-
Tricalcium Silicate	(C_3S)	(%)		58.2
Dicalcium Silicate	(C_2S)	(%)		15.4
Tricalcium Aluminate	(C_3A)	(%)		6.8
Alkalies	($Na_2O+0.658K_2O$)	(%)		0.60
Chlorides		(%)		0.02

PHYSICAL PROPERTIES			
Specific Surface: Air Permeability test	(M^2/Kg)	Min. 260	322
Autocalve Expansion	(%)	Max. 0.80	0.01
Time of Setting : Vicat test			
Initial	(Minutes)	Min. 45	135
Final	(Minutes)	Max. 375	190
Air Content of Mortar	Vol(%)	Max. 12	6.9
Compressive Strength			
3 Days	(psi)	Min. 1740	3200
7 Days	(psi)	Min. 2760	4100
28 Days	(psi)		5600

We certify that quality of cement conforms to the specifications as stated above.

Chief Chemist

DY.Process Manager

WLB - 051 (11)

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صناعة نظيفة بيئة مستدامة
Clean Industry - Sustainable Environment

TEST CERTIFICATE

ASTM C-150-12 TYPE V CEMENT

Week No : 02/17 **Date:** 15/02/2017

Period: 08/01/2017 - 14/01/2017

CHEMICAL COMPOSITION			REQUIREMENTS	RESULTS
Loss on Ignition		(%)	Max. 3.0	1.25
Insoluble Residue		(%)	Max. 0.75	0.36
Silicon Dioxide	(SiO_2)	(%)		20.70
Aluminium Oxide	(Al_2O_3)	(%)		3.48
Ferric Oxide	(Fe_2O_3)	(%)		4.89
Calcium Oxide	(CaO)	(%)		64.76
Magnesium Oxide	(MgO)	(%)	Max. 6.0	1.46
Sulphur Trioxide	(SO_3)	(%)	Max. 2.3	2.14
Tricalcium Silicate	(C_3S)	(%)		69.8
Dicalcium Silicate	(C_2S)	(%)		6.7
Tricalcium Aluminate	(C_3A)	(%)	Max. 5.0	1.0
$C_4AF + 2\ C_3A$		(%)	Max. 25.0	16.9
Alkalies	($Na_2O+0.658K_2O$)	(%)		0.50
Chlorides		(%)		0.02

PHYSICAL PROPERTIES			
Specific Surface: Air Permeability test	(M^2/Kg)	Min. 260	331
Autocalve Expansion	(%)	Max. 0.80	0.01
Time of Setting : Vicat test			
Initial	(Minutes)	Min. 45	135
Final	(Minutes)	Max. 375	190
Air Content of Mortar	Vol(%)	Max. 12	7.2
Compressive Strength			
3 Days	(psi)	Min. 1160	3200
7 Days	(psi)	Min. 2180	4000
28 Days	(psi)	Min. 3050	5200

We certify that quality of cement conforms to the specifications as stated above.

Chief Chemist

DY.Process Manager

WLB - 051 (11)

Gulf Cement Company P.S.C

P.O. Box : 5295, Ras Al Khaimah
United Arab Emirates

Phone : +971 7 2668222
Fax : +971 7 2668288 / 2668038
E-mail : info@gulfcement.ae
Website : www.gulfcement.ae

ISO 9001 : 2008 & ISO 14001 : 2004 CERTIFIED
رأس المال المصرح به والمدفوع: 821,096,820 درهم الإمارات
Authorised and paid up capital : AED 821,096,820

ص.ب : 5295 - رأس الخيمة
الإمارات العربية المتحدة

هاتف : 2668222 7 971+
فاكس : 2668038 / 2668288 7 971+
البريد الإلكتروني : info@gulfcement.ae
الموقع على الإنترنت : www.gulfcement.ae

PROJECT:	EMPLOYER:	REF.:
DEIRA MALL	NAKHEEL	UNEC/J290/MAS/70/REV 0
CONTRACT NO.:	CONTRACTOR :	YOUR REF:
ENGINEER : RSP TED JACOB ENGINEERING GROUP na		DATE: 27-May-18

SUBMITTAL FOR APPROVAL OF MATERIALS

1. MATERIAL DESCRIPTION (one item only on this form) :
ALTERNATIVE SUPPLIER: PORTLAND CEMENT (CEM I, CEM II) 42.5N
NOTE: SUPERSEDES UNEC/J290/MAS 34 rev 0 and UNEC/J290/MAS 35 rev 0.

Area of Application : various
Drawing Ref. : various — B.O.Q. Ref. No. : various
Specification Ref. : 33000,33500, 34000 — Standards : -

Attach all relevant technical literature marked to identify relevant description, current Test Certificates, samples as appropriate.

2. MANUFACTURER/SUPPLIER :
Company Name : M/s Lafarge, M/s Rak Cement, M/s Union Cement, M/s Gulf Cement,
Address : PO box 99745 Dubai, PO Box 2499 RAK, PO box 170 RAK, PO box 5295 RAK
Local Agent : M/S HUB TEC BUILDING MATERIALS

3. DELIVERY :
Country of Origin : DUBAI/ RAK

Availability: (◉) Locally Manufactured ( ) Overseas

Delivery : Ex-works/ Total Duration [ ] [ ]
Estimated Time of Arrival on Site [ ]

Program : Date Material Required on Site [ ]
Latest Date for Order [ ]

We certify that the above submitted items have been reviewed in detail and are correct and in strict conformity with the contract drawings and specifications except as otherwise stated; also that the material sources indicated above have been reviewed in detail and that they will supply the submitted items in conformity with the above and deliver same timely.

Requested by:	FOR SUB-CONTRACTOR		FOR MAIN-CONTRACTOR	
	NAME/SIGNATURE	DATE:	NAME/SIGNATURE	DATE:
Checked by QA/QC:				27/05/218
Checked by CM/PM:				27/05/2018

4. ERA'S CONSULTANT COMMENTS :
TECH! - * TEST RESULTS FROM DM APPROVED LABORATORY TO BE SUBMITTED PRIOR TO USE.
* PROJECT SPECIFICATION & TRAKHEES REQUIREMENT TO BE COMPLIED.
* ANY REJECTION OF THE MATERIAL IN THE ABSENCE OF TEST REPORT WILL BE CONTRACTOR'S RESPONSIBILITY.

☐ Approved ☐ Approved As Noted ✓ ☐ Revise and Resubmit ☐ Rejected

Signature TECH SRE / AOR DATE 27/06/18 10.06.18

CLIENT:
No objection subject to compliance with local laws.

☐ Approved ☐ Approved As Noted ☐ Revise and Resubmit ☐ Rejected

Signature DATE 18/6/18

CONTRACTOR:
RESPONSE RECEIVED BY: SIGNATURE: DATE: 27 MAY 2018

Approval shall not relieve Contractor of his liabilities under the Contract or constitute authorization of any change in Contract Documents.

RECEIVED 19 JUN 2018 BY

DISTRIBUTION: ☑ RSP

MH

The Towers FZ - LLC	GS	MRT

Proposed Building (3B+G+21+Roof)
Plot No. IMPZ.K.15 at Me'Aisem First Dubai, UAE

CLIENT	CONSULTANT	CONTRACTOR
THE TOWERS FZ - LLC	GOLDEN SQUARE ENGINEERING CONSULTANTS	MODERN BUILDING CONTRACTING COMPANY

REF NO	PRE-QUALIFICATION SUBMITTAL	DATE
SC/IMPZ/PQ/0005		23-May-18

Sub contractor Name & Stamp	Contract Ref
HUB TEC Building Materials	

Scope of Work

Civil Material Works

Item Description:	Pre-Qualification Document	
Supplier / Manufacturer:		
Engr. Loai Sommad Contractor's Name & Stamp	23/05/2018 Contractor's Sign & Date	23 MAY 2018 RECEIVED (3B+G+21+R) IMPZ.K.15 Al Me'Aisem First, Dubai, UAE Consultant's Receipt Sign & Date

For Consultant's use

The above submittal is: o Approved o Approved as Noted o Resubmit o Rejected

Comments

1. Delivered material should be complied with DM requirement.
2. Test certificates are to be provided for all type of materials
3. Materials are to be used should be complied with the project requirement and specifications.

Engr. Alaa Faiq Name,Sign, Date & Stamp Resident Engineer	27/5/2018 Name,Sign & Date Discipline Engineer	28.05.18 Name,Sign, Date & Stamp Contractor Receiving

READY
CONCRETE

Standard Concrete

A type of concrete that is manufactured and mixed in a batching Plant as per a special mix design and then delivered to the site by Transit Mixers Trucks. Depending on site and clients requirements, usually ranging from 10 to 50 MPa.

Self-Compacting Concrete

A concrete that is able to flow under its own weight and completely fill the formwork, while maintain homogeneity even in the presence of congested reinforcement, and then consolidate without the need for vibrating compaction. The use of SCC improves quality of concrete, construction process and offers benefits to key areas such as energy and health and safety.

SCC Benefits:

Solve problems with placing concrete on site such as in areas of congested reinforcement, complex formwork or poor access.

- Improved surface finishes.
- Safer workplace environment.
- Increased productivity.

Fields of application: in-situ concrete such as in congested reinforcement, retaining walls, bridge pier replacement and column encasement; precast concrete products; Tunnel lining; walls and columns with textured architectural finish etc.

Durable Concrete

A series of concrete mixtures designed for concrete structures to perform their intended functions while maintaining the required strength and serviceability during the specified or traditionally expected service life under various conditions of exposure.

Fields of applications: bridges, tunnels, power and desalination plants

Waterproof Concrete

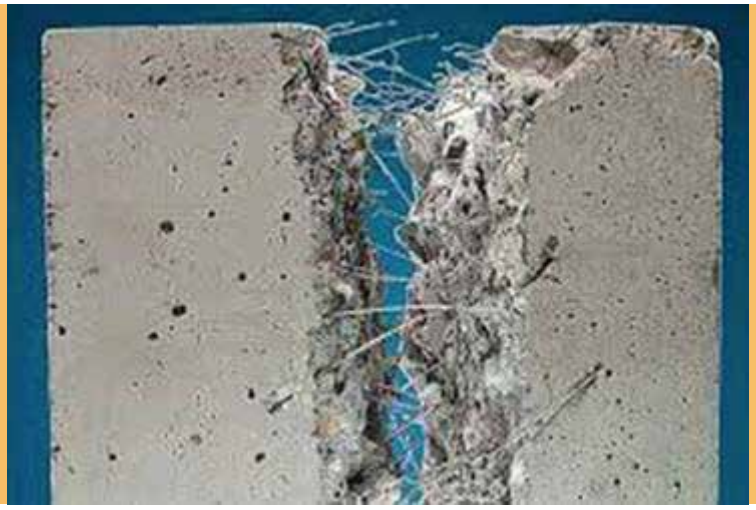
Concrete that specially designed to be placed underwater with the ability to resist cement washout. The basic requirements that concrete maintains its cohesiveness and not prone to segregation with sufficient work ability to be self-leveling and self-compacting. No dispersal concrete using anti-washout admixture can be formulated for use in free-flow or turbulent underwater conditions.

High Performance Concrete

Concrete designed with higher cement content and lower water cement ratio compared to standard concrete. Compressive strength normally ranges from 60 MPa to100MPa with an occasional 120 MPa. High performance concrete is not all about strength, there are other desirable properties; an adequate rheology primarily workability – at the time of placement, high modulus of elasticity , low permeability
and resistance to some forms of attack. As such, a broadened range of cementitious materials and variety of admixtures is used to enhance these properties.
Fields of application: high rise buildings, bridges and in structures under sever exposure condition.

Early Setting Concrete

A Type of concrete with an added special admixture gives a result of Quick setting concrete to be used for precast blocks , specific areas with special requirements of an early strength concrete.



Fiber Reinforced Concrete

Refers to a concrete mixed with fibers to prevent uncontrolled crack development and to provide an alternative to the provision of conventional steel bars or welded fabric in some applications. Specific values for the various properties will depend on the strength of the concrete and on the type and dosage of fibers used.

Fields of application: external paving areas, sprayed concrete, slabs and precast elements.

Paving Concrete, sub-base and pavement

Refers to a range of designed concrete that can be used in the construction of external in-situ concrete paving with a focus on consistence, finishes, strength, durability and mechanical resistance according to the design requirements and its intended working life.

Fields of application: paving for ports or container yards, paving for airfield runways or aprons, paving subject to heavy loading.

Pigment Color Concrete

Aesthetically enhanced concrete designed to have variety of colors depending on the structure and applications.

Fields of application: Decorative concrete

Slip-forming Concrete

Refers to a concrete that is specifically designed to have adequate workability with low frictional resistance yet achieve a high early strength development enabling the slip form to be raised.

Fields of application: Towers, chimneys, bridge piers, shear walls, silos, oil platforms, water tanks, shaft lining, and nuclear power containment vessels.

Thermal Backfill

Designed and manufactured for the underground Transmission and Distribution Industry. Suitable for underground power cable of high ampacity and longer service life. FTB provides thermal stability for underground cables by dissipating the heat generated thus preventing the power cable from exceeding its safe operating temperatures.

The superior characteristics of FTB:

– Low dry thermal resistivity.
– Expected dry density of 1800 – 2000 Kg/m3
– Can be poured or pumped.
– Fill the space without vibration
– Easily to install, easily to remove if required with no risk of damaging the cable jacket.
– Ideal for areas where mechanical compaction is not feasible or practical.

GOVERNMENT OF DUBAI

DUBAI MUNICIPALITY

CERTIFICATE OF PRODUCT CONFORMITY
Concrete Production and Delivery Facilities

Dubai Central Laboratory Department (DCLD) of Dubai Municipality
hereby attests that:

RAK MIX LLC (Dubai Branch) - Plant #1 and #2

P.O. Box 34598, Jebel Ali Industrial Area, Dubai, UAE

(with production and delivery facilities as given in the attached Scope of Certification)

has been assessed and found in conformity with the requirements of Dubai Municipality Standard Specifications DMS 026 "Technical Requirements for the Operation of Ready Mixed Concrete Plants" and the relevant Specific Rules.

Accordingly, DCLD hereby authorizes the above company to use the DCL Conformity Mark to indicate conformance with the requirements of the certification scheme.

for / ENGR. AMIN AHMED AMIN
Director, Dubai Central Laboratory Department
Dubai Municipality

CB-003-PRD

Certificate No: CL17020527
Valid Until: 25/11/2019

PLANT AND TRUCK CONFORMITY

Current Issue Date: 26/11/2018
Original Issue Date: 26/11/2017

The attached Scope of Certification bearing the same Certificate Number forms an integral part of this Certificate.
This Certificate is an electronic document subject to the Terms and Conditions of the Product Certification System and shall not be reproduced except in full.

DUBAI MUNICIPALITY

DUBAI CENTRAL LABORATORY DEPARTMENT

CONCRETE PRODUCTION AND DELIVERY CERTIFICATION SCHEME

SCOPE OF CERTIFICATION

FOR CERTIFICATE NO. CL17020527

Certificate Issued To:	**RAK MIX LLC (Dubai Branch), Plant #1 and #2** P.O. Box 34598, Jebel Ali Ind'l Area, Dubai, UAE
Applicable Standard Specification:	**DMS 026** – Technical Requirements for the Operation of Ready Mix Concrete Plants
Applicable Specific Rules:	**RD-DP21-2177 (IC)** - Specific Rules for Certification of Ready-Mixed Concrete Plants in Accordance with Administrative Decision (316) 2012 and DMS 026. **RD-DP21-2086 (IC)** – Factory Production Control System for Ready-Mixed Concrete Plants and CBUs

SCOPE: This Certificate indicates that the plant implements a quality management system and has the appropriate production and delivery facilities (as mentioned below) capable of producing concrete according to the required specifications. Conformance of the final product with the agreed concrete specifications shall be verified according to the usual inspection methods and as agreed between the plant and its customer.

CERTIFIED BATCHING PLANTS

As required by the certification scheme, the plants listed below are central mixing with automatic batching of concrete components including cementitious materials, aggregates, water and admixtures:

S/N	Plant Identification	Plant Details
1	Ready Mix Concrete Batching Plant (Plant #1)	Manufacturer : SICOMA (Italy) Serial Number : 14989 Control System : GPE/SICOMA Year: : 2015
2	Ready Mix Concrete Batching Plant (Plant #2)	Manufacturer : NISBAU-EUROMIX Serial Number : B2051410001 Control System : GPE Year: 2016

P.O. Box 67, DCL, Zabeel Road, Karama, Dubai, UAE

CERTIFIED CONCRETE TRUCKS

S/N	Truck Identification	Registration No.	Truck Details
1	TM 61	R 52560	IMER
2	TM 62	R 52554	IMER
3	TM 63	R 52563	IMER
4	TM 64	R 37811	IMER
5	TM 65	R 37815	IMER
6	TM 66	R 52548	IMER
7	TM 67	R 52553	IMER
8	TM 68	R 37803	IMER
9	TM 69	R 52550	IMER
10	TM 70	R 52562	IMER
11	TM 71	O 64096	IMER
12	TM 72	R 91995	IMER
13	TM 73	R 64849	IMER
14	TM 74	G 42920	IMER
15	TM 75	O 36909	IMER
16	TM 76	J 38762	IMER
17	TM 90	T 71236	CIFA
18	TM 91	T 71252	CIFA
19	TM 92	T 78248	CIFA
20	TM 93	T 71240	CIFA
21	TM 94	T 71228	CIFA
22	TM 95	T 78249	CIFA
23	TM 96	T 66094	CIFA
24	TM 97	T 78250	CIFA
25	TM 98	T 74921	CIFA
26	TM 99	T 78251	CIFA
27	TM 121	F 29190	CIFA

28	TM 122	F 31915	CIFA
29	TM 123	F 29153	CIFA
30	TM 124	F 30914	CIFA
31	TM 125	F 31691	CIFA
32	TM 126	F 32106	CIFA
33	TM 127	F 31876	CIFA
34	TM 128	F 29522	CIFA
35	TM 129	F 31678	CIFA
36	TM 130	F 31383	CIFA
37	TM 131	F 30629	CIFA
38	TM 132	F 31805	CIFA
39	TM 133	F 31228	CIFA
40	TM 134	F 29456	CIFA
41	TM 135	F 30848	CIFA
42	TM 136	F 29884	CIFA
43	TM 137	F 31406	CIFA
44	TM 138	F 31307	CIFA
45	TM 139	F 29460	CIFA
46	TM 140	F 31604	CIFA
47	TM 141	F 30198	CIFA
48	TM 142	F 28894	CIFA
49	TM 143	F 31356	CIFA
50	TM 144	F 29023	CIFA
51	TM 145	F 30262	CIFA
52	TM 146	F 31052	CIFA
53	TM 147	F 31514	CIFA
54	TM 148	F 28979	CIFA
55	TM 149	F31284	CIFA
** Nothing Follows**			

P.O. Box 67, DCL, Zabeel Road, Karama, Dubai, UAE

NOTE 1 *This document forms part of the Certificate of Conformity bearing the same certificate number*

NOTE 2: *The above certified batching plants and delivery trucks shall be identified by the DCL Conformity Mark*

Original Issue Date	*: 26 November 2017*
Current Issue Date	*: 26 November 2018*
Valid Until	*: 25 November 2019*

ARIF HUSAIN AL MARZOOQI
Products Conformity Assessment Section Manager
Dubai Central Laboratory Department

P.O. Box 67, DCL, Zabeel Road, Karama, Dubai, UAE

حكومة دبي
GOVERNMENT OF DUBAI

بلدية دبي
DUBAI MUNICIPALITY

CERTIFICATE OF PRODUCT CONFORMITY
Concrete Production and Delivery Facilities

Dubai Central Laboratory Department (DCLD) of Dubai Municipality
hereby attests that:

RAK MIX LLC (Dubai Creek Harbor) - CBU - Plant #3, #4 and #5

P. O. Box 393619 Dubai Creek Harbor, Dubai, UAE

(with production and delivery facilities as given in the attached Scope of Certification)

has been assessed and found in conformity with the requirements of Dubai Municipality Standard Specifications DMS 026 "Technical Requirements for the Operation of Ready Mixed Concrete Plants" and the relevant Specific Rules.

Accordingly, DCLD hereby authorizes the above company to use the DCL Conformity Mark to indicate conformance with the requirements of the certification scheme.

for / ENGR. AMIN AHMED AMIN
Director, Dubai Central Laboratory Department
Dubai Municipality

eiac
CB-003-PRO

Certificate No: CL16020562
Valid Until: 05/03/2020

DCL PLANT AND TRUCK CONFORMITY DMS 026

Current Issue Date: 06/03/2018
Original Issue Date: 06/03/2018

DUBAI CENTRAL LABORATORY DEPARTMENT

CONCRETE PRODUCTION AND DELIVERY CERTIFICATION SCHEME

SCOPE OF CERTIFICATION

FOR CERTIFICATE NO. CL18020562

Certificate issued To: **RAK MIX LLC - DUBAI CREEK HARBOR – CBU – Plant #3, #4 and #5**
P. O. Box 393619, Dubai Creek Harbour Project, DUBAI, UAE

Applicable Standard Specification: DMS 026 – Technical Requirements for the Operation of Ready Mix Concrete Plants

Applicable Specific Rules: RD-DP21-2177 (IC) – Specific Rules for Certification of Ready-Mixed Concrete Plants in Accordance with Administrative Decision (316) 2012 and DMS 026.
RD-DP21-2086 (IC) – Factory Production Control System for Ready-Mixed Concrete Plants and CBUs

SCOPE: This Certificate indicates that the plant implements a quality management system and has the appropriate production and delivery facilities (as mentioned below) capable of producing concrete according to the required specifications. Conformance of the final product with the agreed concrete specifications shall be verified according to the usual inspection methods and as agreed between the plant and its customer.

CERTIFIED BATCHING PLANTS

As required by the certification scheme, the plants listed below are central mixing with automatic batching of concrete components including cementitious materials, aggregates, water and admixtures:

S/N	Plant Identification	Plant Details
1	Batching Plant # 3	Manufacturer: BHS Control System : GPE Manufacturing date: 2017
2	Batching Plant # 4	Manufacturer: BHS Control System : GPE Manufacturing date: 2017
3	Batching Plant # 5	Manufacturer: BHS Control System : GPE Manufacturing date: 2017

حكومة دبي
GOVERNMENT OF DUBAI

بلدية دبي
DUBAI MUNICIPALITY

CERTIFIED CONCRETE TRUCKS

All trucks are shifted to Jebel Ali Location Scope.

NOTE 1: *This document forms part of the Certificate of Conformity bearing the same certificate number.*

NOTE 2: *The above certified batching plants and delivery trucks shall be identified by the DCL Conformity Mark.*

NOTE 3: *This certificate shall remain valid up to validity date provided that the NOC issued by the Regulatory Body is still valid.*

Original Issue Date	*: 06 March 2018*
Current Issue Date	*: 06 March 2019*
Valid Until	*: 05 March 2020*

ARIF HUSAIN AL MARZOOQI
Products Conformity Assessment Section Manager
Dubai Central Laboratory Department

P.O. Box 67, DCL, Zabeel Road, Karama, Dubai, UAE

GOVERNMENT OF DUBAI

سلطة دبي للمجمعات الإبداعية
DUBAI CREATIVE CLUSTERS AUTHORITY

TEMPORARY CONSTRUCTION PERMIT

Permit Number: REQ-111377 - 1 Issue Date: 13-Nov-2018 Expiry Date: 14-May-2019

Project Location: DUBAI CREEK HARBOUR Plot Number: 4154099

Location: Plot # 4154099 @ Dubai Creek Harbour

Permitted Activities: Temporary batching plant to supply concrete to sites

Plot Owner(s):

Contractor

Name: RAK MIX LLC - DUBAI BRANCH

License Number: 731113

Specific Condition(s):

Kindly refer to the attached comment sheet & approved drawings. The comments to be noted and complied.

General Terms & Conditions:

1. Dubai Creative Clusters Authority shall bear no liability arising from the issuance of this Permit and the Contractor shall bear the full liability resulting from any errors in design, execution, stability and safety in accordance with Dubai Creative Clusters Authority Laws and regulations.
2. Special safety precautions required as per RTA rules & regulations if construction work outside plot limit.
3. Adequate precautions should be taken to prevent damages to existing services and any damages / obstruction to existing services should be re-instated as original.
4. The permission for temporary construction should be displayed at construction site.
5. All comments mentioned on the attached drawings should be incorporated.
6. Dubai Creative Clusters Authority regulations and construction laws must be followed, and Development Control Department must be notified in case of any collapses or damages or the neighboring building or services or any accidents and/or incidents on hotline: 04-360 2262

سلطة دبي للمجمعات الإبداعية
GOVERNMENT OF DUBAI
8
DUBAI CREATIVE CLUSTERS AUTHORITY

Printed Date : 13-Nov-2018

dcca.gov.ae

TEL 800-4-DCCA (3221) FAX +971 4 422 4449 PO BOX 478844

COMMENTS SHEET

Submission Type: ZADC-28 Temporary Construction Permit Application

Application Details : Temporary Construction Permit

Tracking Number:REQ-111377	Status: No Objection With Comments
Plot Number: 4154099	Project Location: DUBAI CREEK HARBOUR

Comment(s):

Operations-Technical (HS) Status: No Objection With Comments

1 The mentioned patching plan should be surrounded with temporary fence.

2 Concrete distribution is allowed within area projects only.

3 NOC from relevant authority to be obtained.

4 Hoarding must be painted in White with no logos or art works as per the Zoning affair (DCCA) requirements

5 Coordinate with onboard infrastructure consultant & contractor

6 Comply with HSE regulation

7 Ensure the electricity is connected & installed as per DEWA regulation

8 Control the entrance & Exit

9 Any changes to the approved site office allocation layout & signboard details would be considered as a violation of regulations and the contractor would be penalized accordingly

Note(s):

1. The above comments issued along with the Temporary Construction Permit to be noted and complied.
2. Kindly arrange to collect the approved drawings from Dubai Studio City, Building 2 - 1st Floor within 10 working days from the date of this notification. Dubai Creative Clusters Authority - Development Control Department does not retain uncollected drawings and shall be discarded.

dcca.gov.ae

TEL 800-4-DCCA (3223) FAX +971 4 4272 443 PO Box 1758

BLOCKS

BLOCK TYPES AND SPECIFICATIONS											
	Type	Length (mm)	*Width (mm)	Height (mm)	Dimension (mm)	Weight (kg)	Density (kg/m^3)	Strength (N/mm^2)	Thermal Transmittance U-value [$W/(m^2.K)$]	Thermal Conductivity K-value [W/(m.K)]	Thermal Resistance R-value ($m^2.K)/W$
HOLLOW	4-inch	400	100	200	400x100x200	14.8	1850	8.0 - 10.0	NA	NA	NA
	6-inch	400	150	200	400x150x200	18.8	1567		NA	NA	NA
	8-inch	400	200	200	400x200x200	22.8	1425		NA	NA	NA
SOLID	4-inch	400	100	200	400x100x200	18.0	2250	8.0 - 12.0	NA	NA	NA
	8-inch	400	200	200	400x200x200	37.0	2313		NA	NA	NA
INSULATION	8-inch	400	200	200	400x200x200 (60mm insert)	24.5	1469	8.0 - 10.0	0.50	0.111	1.805
	10-inch (Hollow)	400	250	200	400x250x200 (60mm insert)	27.1	1650		0.48	0.133	1.881
	10-inch (Thin Cavities)	400	250	200	400x250x200 (110mm insert)	24.7	1220		0.29	0.078	3.203
	12-inch (Thin Cavities)	400	300	200	400x300x200 (160mm insert)	24.9	917		0.20	0.064	4.687

TECHNICAL DATA – CONCRETE BLOCKS

We provide quality products with state-of-the art machinery and equipment.

Quality is a standard we strive to achieve, hence our compliance with industry standards and specifications among which are the British Standard (BS) and Dubai Municipality Standard (DMS).

Raw Materials

Aggregates: choice of raw materials from crushed aggregates sourced from Ras Al Khaimah. Our in-house Product Research and Development Department routinely check raw materials thus ensuring strict consistency in quality. Aggregate samples are also sent to third-party Laboratories for grading, determination of flakiness and shell content, fines, aggregate crushing value, acid soluble Chloride and Sulphate content, etc.

Cement: we choose cement supply in compliance with BS 112, and 117 standards for Ordinary Portland Cement (OPC) and BS 4027 for Sulphate Resistant Cement (SRC). Test certificates are obtained from suppliers to ensure and confirm quality of delivery.

Water: ensures that laboratory check is done to ensure good quality of water in our day-to-day productions.

Curing: Our products undergo curing in chambers using state of the art procedures and techniques. This process allows achieving higher strength over a short period of time and consistent quality as expected.

Chemical Analysis

Salt contents are within the recommended limits for our blocks in accordance with BS 1881: 1988 Part 124. The acid soluble content of blocks tested is an average of 0.02% by mass of hardened concrete.

Type	Sulphate	Chloride
Hollow	0.19	0.04
Solid	0.20	0.05

Performance and Properties for Blocks

There is no doubt that for over 2 decades, BS EN 1338 has served our industry well in developing concise and unambiguous specifications for concrete blocks of all types, used in far ranging applications.

Like most British Standards it has been necessary to adapt BS EN 1338 to suit an enlarged market as well as to reflect up to date materials and testing.

- Mechanical Strength: The strength of our units are declared air-dry. The condition and surface preparation is done according to appropriate test method – BS EN 772-1.

we ensure that our blocks are produced with the strength requirements as per the set standards of BS EN 1338

Fire Resistance

Quality Management System consciously takes into consideration the requirements of the British Standards, BS 476-21:1987 and BS 476-22: 1987, respectively for the Methods for determination of the fire resistance of load bearing elements of construction and Methods for determination of the fire resistance of non-load bearing elements of construction.

We endeavor to produce Concrete Hollow, Solid and Thermal (sandwich) blocks, attaining a minimum of 4-hour Fire Rating.

Checks are been conducted with Third Party Laboratories to ensure compliance.

Please refer to the section below for the specification of our Concrete Blocks.

Block	Type	Individual Strength (N/mm²)	Average Strength (N/mm²)
Hollow	Non- load -bearing	6.0	7.5
	Load bearing	10.0	12.5
Solid	Load -bearing	10.0	12.5 & 21.0

- Chloride and Sulphate Content: When tested in accordance with BS 1881 : Part 124, the acid soluble chloride content (Cl) of blocks shall be declared as ≤0.05% and sulphate content ≤ 0.5% by mass of concrete.

POLYESTERENE BLOCKS

We provide quality products with state-of-the art machinery and equipment.

Among our range of products are Thin Cavity Normal Weight Polystyrene Sandwich Blocks. These are manufactured in compliance with the British Standard BS 6073: Part 1, *"Specification for precast concrete masonry units"* as well as the requirements of the Dubai Municipality Standard DMS 1 Part 5 entitled *"Specification for precast concrete blocks, Part 5: Concrete polystyrene sandwich blocks"*,

Technical Specifications

- **Mechanical Strength**: The compressive strength of our units are declared air-dry. The condition and surface preparation is done according to appropriate test method – BS EN 772-1.
- **Chloride and Sulphate Content**: When tested in accordance with BS 1881: Part 124, the acid soluble chloride content (Cl) of blocks shall be declared as ≤0.05% and sulphate content ≤ 0.5% by mass of concrete.

THERMAL BLOCKS SPECIFICATIONS						
Block Type	Insert Thickness (mm)	Length (mm)	*Width (mm)	Height (mm)	Dimensions (mm)	Weight (kg)
8" Thin Cavities Thermal	60	400	200	200	400 x 200 x 200	24.5
10" Hollow Cavities Thermal	60	400	250	200	400 x 250 x 200	27.1
10" Thin Cavities Thermal	110	400	250	200	400 x 250 x 200	24.7
12" Thin Cavities Thermal	160	400	300	200	400 x 300 x 200	24.9

**For Dimensions, thickness is described as width*

The Thermal Transmittance Value of normal weight Thin Cavity Thermal Blocks (sandwich) are stated as thus in reference to the Report on Thermal Transmittance (U-value) Properties issued by DCL; Ref: TT-203-14, dated 13/05/2014:

Block Type	Thickness (mm)	Polystyrene Thickness (mm)	U-value [W/(m^2.K)]	k-value [W/(m.K)]	Reference no.
8" Thin Cavity Thermal	200	60	0.50	0.111	TT-203-14
10" Thin Cavity Thermal	250	110	0.29	0.078	330-2016
10" Thick Cavity Thermal	250	60	0.48	0.133	TT-417-2017
12" Insulated Thermal	300	160	0.20	0.064	TT-419-2017

The expanded Polystyrene used in the manufacture of our Thermal Blocks are certified by the Dubai Central Laboratory and with the Certificate No. CL05020001.

حكومة دبي
GOVERNMENT OF DUBAI

بلدية دبي
DUBAI MUNICIPALITY

REF: 440/01/2014/002029

DATE: 13/05/2014

SUBJECT: Thermal transmittance (U) value calculation

Reference is made to your application dated 04/05/2014 regarding the subject above, please note the following:

1. Thermal transmittance (U) value of a wall constructed using "200 mm Thick, Concrete-Polystyrene Hollow Sandwich Blocks with 60 mm Expanded Polystyrene insert" is as follows:

   a) Wall configuration:

Layer	Thickness [mm]	Thermal conductivity [W/m.K]	Thermal Resistance [m^2.K/W]
External surface	--	--	0.04
Plaster	15	0.72	0.0208
Block*	200	0.111	1.8018
Plaster	15	0.72	0.0208
Internal surface	--	--	0.12
TOTAL	230	--	2.0034
* See Report on Thermal Transmission Properties issued by DCL; Ref: TT-203-14 dated on 13/05/2014			

   b) Thermal transmittance (U-value)

Description	U-value [W/(m^2.K)]
Wall Thermal Transmittance ($U = 1/R_T$)	0.50

   Note: These values conforms with the Dubai Municipality requirement of maximum thermal transmittance (U) value for walls of 0.57 W/ (m^2.K)

2. The thermal transmittance (U-value) mentioned above is for a wall constructed using "Thermal Blocks" conforming to the requirements of the Dubai Municipality Standard **DMS 1 Part 5** entitled *"Specification for precast concrete blocks. Part 5: Concrete-polystyrene sandwich blocks"*, and installed as per "***Annex B: Site application of Sandwich-blocks***" of the same Standard using the polystyrene strips in the horizontal and vertical mortar joints with alkali resistant fiber mesh* to connect the two concrete leaves of the blocks.

   * If metallic mesh, ladders, ties …etc. are used to connect the two concrete leaves of the blocks, the thermal transmittance (U-value) need to be recalculated to take the effect of the thermal bridging effect.

Regards,

Arif Husain Al Marzooqi
Head of Research and Standardization Management Office
Dubai Central Laboratory

Copy:
- Dir
- Mariam Alkharousi

رؤيتنا: بناء مدينة متميزة تتوفر فيها رفاهية العيش و مقومات النجاح.
Our Vision : To create an excellent city that provides the essence of success and comfort of living.

GOVERNMENT OF DUBAI

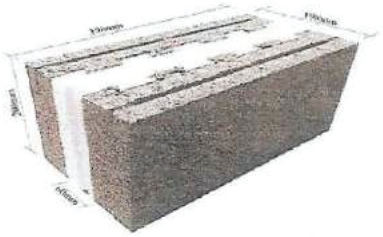
Dubai Municipality
Dubai Central Laboratory Department
Research & Standardization Management Office

DUBAI MUNICIPALITY

REPORT ON
THERMAL TRANSMISSION PROPERTIES BY CALCULATION METHOD
ACCORDING TO BS EN ISO 6946

REFERENCE NO.	:	TT-203-14
ISSUE DATE	:	13/05/2014
PRODUCT	:	200 mm thick Concrete-Polystyrene Sandwich block
PRODUCT DESCRIPTION	:	Normal Weight Concrete-Polystyrene Hollow Sandwich Blocks (400*200*200)mm with 60 mm thick Expanded polystryrene insert
PRODUCT WEIGHT (kg)	:	23
PRODUCT THICKNESS (m) (PERPENDICULAR TO HEAT FLOW DIRECTION)	:	0.2

PRODUCT CONFIGURATION :



8" THERMAL INSULATION BLOCK
396x198x208mm

Product's COMPONENTS	DENSITY [kg/m³]	THERMAL CONDUCTIVITY [W/(m.K)]	CONDITION of TEST		TEST REPORT / REFERENCE
			% RH	°C	
Concrete	2300	1.85	--	--	DM approved materials list
Expanded Polystyrene	25	0.0368	60±5	35±2	DCL Certificate no. CL05020001 for National Polystyrene Packaging Factory

CALCULATION RESULTS	UPPER LIMIT	LOWER LIMIT	AVERAGE
THERMAL RESISTANCE [m².K/W]	1.885	1.724	1.805
EQUIVALENT THERMAL CONDUCTIVITY [W/(m.K)]			0.111

REMARKS :

PREPARED BY:
MARIAM ALKHAROUSI
SENIOR STANDARDIZATION RESEARCHER

APPROVED BY:
ARIF HUSAIN AI MARZOOQI
HEAD OF RESEARCH & STANDARDIZATION MANAGEMENT OFFICE

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GOVERNMENT OF DUBAI

DUBAI MUNICIPALITY

DATE: 01/11/2017

SUBJECT: Thermal transmittance (U) value calculation

Reference is made to your application dated 29 OCTOBER 2017 regarding the subject above, please note the following:

1. Thermal transmittance (U) value of a wall constructed using "250 mm Thick, Normal Weight Concrete-Polystyrene Sandwich Hollow Blocks with 60 mm thick Expanded polystyrene insert" is as follows:

   a) Wall configuration:

Layer	**Thickness [mm]**	**Thermal conductivity [W/m.K]**	**Thermal Resistance [m^2.K/W]**
External surface	--	--	0.04
Plaster	15	0.72	0.0208
Block♣	250	0.133	1.8797
Plaster	15	0.72	0.0208
Internal surface	--	--	0.12
TOTAL	280	--	2.0813
♣ See Report on Thermal Transmission Properties issued by DCL; Ref: TT-417-2017 dated on 01/11/2017			

   b) Thermal transmittance (U-value)

Description	**U-value [W/(m^2.K)]**
Wall Thermal Transmittance ($U = 1/R_T$)	0.48

Note:

1. This report represents submitted samples only.

REGARDS,

ENG. MARIAM ALKHAROUSI
SENIOR PRODUCTS QUALITY ENGINEER

*ON BEHALF OF : ARIF HUSAIN AL MARZOOQI**
HEAD OF PRODUCTS CONFORMITY ASSESSMENT SECTION
DUBAI CENTRAL LABORATORY

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GOVERNMENT OF DUBAI

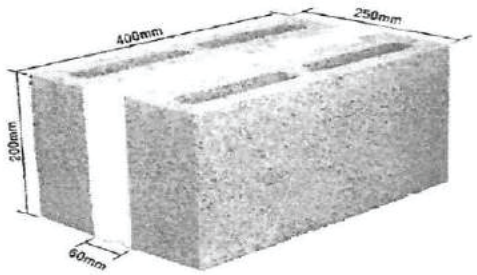
Dubai Municipality
Dubai Central Laboratory Department
Research & Standardization Management Office

DUBAI MUNICIPALITY

REPORT ON
THERMAL TRANSMISSION PROPERTIES BY CALCULATION METHOD
ACCORDING TO BS EN ISO 6946

REFERENCE NO.	:	TT-417-2017
ISSUE DATE	:	01/11/2017
PRODUCT	:	250 mm thick Concrete-Polystyrene Sandwich Hollow block
PRODUCT DESCRIPTION	:	Normal Weight Concrete-Polystyrene Sandwich Hollow Blocks (400*250*200)mm with 60 mm thick Expanded polystryrene insert
PRODUCT WEIGHT (kg)	:	26
PRODUCT THICKNESS (m) (PERPENDICULAR TO HEAT FLOW DIRECTION)	:	0.25

PRODUCT CONFIGURATION :



Product's COMPONENTS	DENSITY [kg/m³]	THERMAL CONDUCTIVITY [W/(m.K)]	CONDITION of TEST		TEST REPORT / REFERENCE
			% RH	°C	
Concrete	2400	1.85	--	--	DCL approved material
Polystyrene	32	0.037	60±5	35±2	DCL report no. 2016042128 insert manufactured by STYRENE INSULATION INDUSTRIES - ABUDHABI

CALCULATION RESULTS	UPPER LIMIT	LOWER LIMIT	AVERAGE
THERMAL RESISTANCE [m².K/W]	1.966	1.797	1.881
EQUIVALENT THERMAL CONDUCTIVITY [W/(m.K)]			0.133

REMARKS :

ISSUED BY:

MARIAM ALKHAROUSI
SENIOR PRODUCTS QUALITY ENGINEER

ON BEHALF OF :

ARIF HUSAIN Al MARZOOQI *
HEAD OF RESEARCH & STANDARDIZATION MANAGEMENT OFFICE

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GOVERNMENT OF DUBAI

Dubai Municipality
Dubai Central Laboratory Department
Products Conformity Assessment Section

DUBAI MUNICIPALITY

REF: 440/01/2016/00 2834 **DATE: 16/6/2016**

SUBJECT: Thermal transmittance (U) value calculation

Reference is made to your application dated December. 13/6/2016 regarding the subject above, please note that Thermal transmittance (U) value of a wall constructed using "250mm Thick, thin cavities normal Concrete-Polystyrene Sandwich Blocks with 110mm thick. Expanded Polystyrene white insert is as follows:

a) Wall configuration:

Layer	Thickness [mm]	Thermal conductivity [W/m.K]	Thermal Resistance [m^2.K/W]
External surface	--	--	0.04
Plaster	15	0.72	0.0208
Block*	250	0.078	3.20513
Plaster	15	0.72	0.0208
Internal surface	--	--	0.12
TOTAL	280	--	3.40673
* See Report on Thermal Transmission Properties issued by DCL; Ref: 330-2016			

b) Thermal transmittance (U-value)

Description	U-value [W/(m^2.K)]
Wall Thermal Transmittance ($U = 1/R_T$)	0.29

Regards,

Arif Husain Al Marzooqi
Head Of Products Conformity Assessment Section
Dubai Central Laboratory

Copy:
- Sameer Darwish

GOVERNMENT OF DUBAI

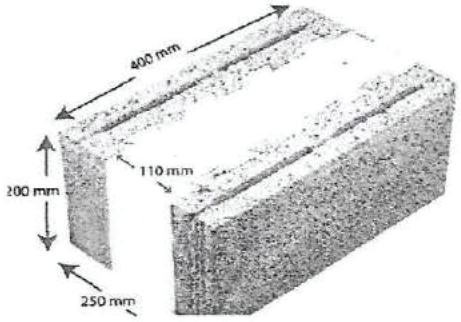
Dubai Municipality
Dubai Central Laboratory Department
PRODUCTS CONFORMITY ASSESSMENT SECTION

DUBAI MUNICIPALITY

REPORT ON
THERMAL TRANSMISSION PROPERTIES BY CALCULATION METHOD
ACCORDING TO BS EN ISO 6946

REFERENCE NO.	:	330-2016
ISSUE DATE	:	16/06/2016
PRODUCT	:	thin cavities normal wieght concrete sandwich block 400*250*200 with 110 polystyrene white insert
PRODUCT DESCRIPTION	:	thin cavities normal wieght concrete sandwich block 400*250*200 with 110 polystyrene white insert
PRODUCT WEIGHT (kg)	:	24
PRODUCT THICKNESS (m) (PERPENDICULAR TO HEAT FLOW DIRECTION)	:	0.25

PRODUCT CONFIGURATION :



Product's COMPONENTS	DENSITY [kg/m³]	THERMAL CONDUCTIVITY [W/(m.K)]	CONDITION of TEST		TEST REPORT / REFERENCE
			% RH	°C	
Concrete	2300	1.85	--	--	DM approved materials list
Expanded Polystyrene	25	0.0377	60±5	35±2	CL05020001

CALCULATION RESULTS	UPPER LIMIT	LOWER LIMIT	AVERAGE
THERMAL RESISTANCE [m².K/W]	3.228	3.177	3.203
EQUIVALENT THERMAL CONDUCTIVITY [W/(m.K)]			0.078

REMARKS :

PREPARED BY:

SAMEER DARWISH
PRINCIPAL FIELD STUDIES RESEARCHER

APPROVED BY:

ARIF HUSAIN AI MARZOOQI
HEAD OF PRODUCTS CONFORMITY ASSESSMENT SECTION

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DATE: 01/11/2017

SUBJECT: Thermal transmittance (U) value calculation

Reference is made to your application dated 29 OCTOBER 2017 regarding the subject above, please note the following:

1. Thermal transmittance (U) value of a wall constructed using "300 mm Thick, Normal Weight Concrete-Polystyrene Sandwich Hollow Blocks with 160 mm thick Expanded polystyrene insert" is as follows:

   a) Wall configuration:

Layer	Thickness [mm]	Thermal conductivity [W/m.K]	Thermal Resistance [m^2.K/W]
External surface	--	--	0.04
Plaster	15	0.72	0.0208
Block*	300	0.064	4.6875
Plaster	15	0.72	0.0208
Internal surface	--	--	0.12
TOTAL	330	--	4.8891
* See Report on Thermal Transmission Properties issued by DCL; Ref: TT-419-2017 dated on 01/11/2017			

   b) Thermal transmittance (U-value)

Description	U-value [W/(m^2.K)]
Wall Thermal Transmittance ($U = 1/R_T$)	0.20

Note:

1. This report represents submitted samples only.

REGARDS,

ENG. MARIAM ALKHAROUSI
SENIOR PRODUCTS QUALITY ENGINEER

*ON BEHALF OF : ARIF HUSAIN AL MARZOOQI**
HEAD OF PRODUCTS CONFORMITY ASSESSMENT SECTION
DUBAI CENTRAL LABORATORY

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GOVERNMENT OF DUBAI

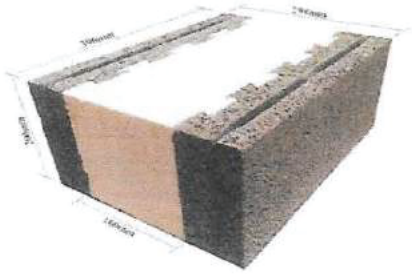
Dubai Municipality
Dubai Central Laboratory Department
Research & Standardization Management Office

DUBAI MUNICIPALITY

REPORT ON
THERMAL TRANSMISSION PROPERTIES BY CALCULATION METHOD
ACCORDING TO BS EN ISO 6946

REFERENCE NO.	:	TT-419-2017
ISSUE DATE	:	01/11/2017
PRODUCT	:	300 mm thick Concrete-Polystyrene Sandwich Hollow block
PRODUCT DESCRIPTION	:	Normal Weight Concrete-Polystyrene Sandwich Hollow Blocks (400*300*200)mm with 160 mm thick Expanded polystyrene insert
PRODUCT WEIGHT (kg)	:	24
PRODUCT THICKNESS (m) (PERPENDICULAR TO HEAT FLOW DIRECTION)	:	0.301

PRODUCT CONFIGURATION :



Product's COMPONENTS	DENSITY [kg/m³]	THERMAL CONDUCTIVITY [W/(m.K)]	CONDITION of TEST		TEST REPORT / REFERENCE
			% RH	°C	
Concrete	2400	1.85	--	--	DCL approved material
Polystyrene	26	0.03563	60±5	35±2	DCL Certificate No. CL05020001

CALCULATION RESULTS	UPPER LIMIT	LOWER LIMIT	AVERAGE
THERMAL RESISTANCE [m².K/W]	4.788	4.585	4.687
EQUIVALENT THERMAL CONDUCTIVITY [W/(m.K)]			0.064

REMARKS :

ISSUED BY:

MARIAM ALKHAROUSI
SENIOR PRODUCTS QUALITY ENGINEER

ON BEHALF OF :

ARIF HUSAIN AI MARZOOQI *
HEAD OF RESEARCH & STANDARDIZATION MANAGEMENT OFFICE

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DUBAI MUNICIPALITY

DUBAI CENTRAL LABORATORY DEPARTMENT
DCL PRODUCT CONFORMITY CERTIFICATION SCHEME

SCOPE OF CERTIFICATION
FOR CERTIFICATE NO. CL16020289

Applicable Standard Specification: DMS 1: Part 1:2011 – Specification for Precast Concrete Blocks Part 1

Applicable Specific Rules: RD-DP21-2169 (IC) "Specific Rules for Certification of Precast Concrete Blocks (as per DMS 1: Part 1:2011) Through Factory Assessment".

S/N	Product Description	Brand Name	Product Details
1	Precast Concrete Blocks	Blocks	**Normal Weight Hollow Concrete Blocks:** 400 x 200 x 200mm 400 x 200 x 150mm 400 x 200 x 100mm **Normal Weight Solid Concrete Blocks:** 400 x 200 x 200mm 400 x 200 x 100mm

NOTE 1: This document forms part of the Certificate of Product Conformity bearing the same certificate number.
NOTE 2: The above products shall bear the DCL Conformity Mark (applied on tag/label of every bundle).
NOTE 3: The above sizes are declared Nominal sizes (mm)

Original Issue Date : 05 January 2016
Current Issue Date : 05 January 2017
Valid Until : 04 January 2018

ARIF HUSAIN AL MARZOOQI
Head of Products Conformity Assessment Section
Dubai Central Laboratory Department

F-IC-2032 R3

DUBAI CENTRAL LABORATORY DEPARTMENT
DCL PRODUCT CONFORMITY CERTIFICATION SCHEME

SCOPE OF CERTIFICATION
FOR CERTIFICATE NO. CL16020290

Applicable Standard Specification: DMS 1: Part 4:2013 – Specification for Precast Concrete Blocks Part 4: Paving Blocks

Applicable Specific Rules: RD-DP21-2172 (IC) "Specific Rules for Certification of Precast Concrete Paving Blocks (as per DMS 1: Part 4:2013) Through Factory Assessment".

S/N	Product Description	Brand Name	Product Details
1	Precast Concrete Paving Blocks	Paving Blocks	**Paving Blocks Rectangular** 200 x 100 x 60mm 300 x 200 x 60mm **Paving (Non Rectangular)** Paving Blocks Square: 100 x 100 x 60mm 200 x 200 x 60mm 300 x 300 x 60mm Diamond Paver: 282.8 x 239.7 x 60mm Paving Blocks Unishape: 225 x 115 x 60mm 225 x 115 x 80mm 225 x 115 x 100mm Paving Block Behaton: 200 x 165 x 60mm Paving Block Star: 139.4 x 139.4 x 60mm Paving Block Cross: 139.4 x 139.4 x 60mm Paving Block Quadro Octagonal: 200 x 200 x 60mm

F-IC-2032 R3

DUBAI CENTRAL LABORATORY DEPARTMENT
DCL PRODUCT CONFORMITY CERTIFICATION SCHEME

SCOPE OF CERTIFICATION
FOR CERTIFICATE NO. CL16020291

Applicable Standard Specification: DMS 1: Part 5:2011 – Specification for Precast Concrete Blocks Part 5: Concrete-Polystyrene Sandwich Blocks

Applicable Specific Rules: RD-DP21-2174 (IC) "Specific Rules For Certification of Concrete- Polystyrene Sandwich Blocks (as per DMS 1: Part 5:2011) Through Factory Assessment".

S/N	Product Description	Brand Name	Product Details
1	Precast Concrete Polystyrene Sandwich Blocks	Thermal Sandwich Blocks	Thermal Blocks Thin Cavities Normal Weight: 400 x 200 x 200 x 60mm 400 x 250 x 200 x 60mm 400 x 300 x 200 x 160mm 400 x 250 x 200 x 110mm Thermal Blocks Hollow Normal Weight: 400 x 250 x 200 x 60mm

NOTE 1: This document forms part of the Certificate of Product Conformity bearing the same certificate number.
NOTE 2: The above products shall bear the DCL Conformity Mark (applied on tag/label of every bundle).
NOTE 3: The above sizes are declared Nominal sizes

Original Issue Date : 05 January 2016
Current Issue Date : 05 January 2017
Valid Until : 04 January 2018

ARIF HUSAIN AL MARZOOQI
Head of Products Conformity Assessment Section
Dubai Central Laboratory Department

F-IC-2032 R3

			Paving Block Cube: 80 x 80 x 60mm Paving Block Hexagon: 175 x 175 x 60mm

NOTE 1: This document forms part of the Certificate of Product Conformity bearing the same certificate number.
NOTE 2: The above products shall bear the DCL Conformity Mark (applied on tag/label of every bundle).
NOTE 3: The above sizes are declared Nominal sizes (mm)

Original Issue Date : 05 January 2016
Current Issue Date : 05 January 2017
Valid Until : 04 January 2018

ARIF HUSAIN AL MARZOOQI
Head of Products Conformity Assessment Section
Dubai Central Laboratory Department

F-IC-2032 R3

CERTIFICATE OF COMPLIANCE

DETERMINATION OF COMPRESSIVE STRENGTH OF CONCRETE BLOCKS/ SANDWICH BLOCKS AS PER DMS PART 1, 4 & 5

Certificate No:	*CL16020289*		
Product Type:	Normal Weight Concrete Hollow Blocks		
Product Size:	400 * 150 * 200		
Production Date:	03/07/2017	Test Date:	14/07/2017
Sampling Date:	04/07/2017	Certificate Date:	15/07/2017
Lot Number:	*17830561*		

Average Dimensions (mm)		
Length	Width	Height
400.00	150.00	200.00

Compressive Strength (N/mm^2)		
Sample No.	Failure Load (kN)	Individual Strength (N/mm^2)
1	624	10.40
2	648	10.80
3	642	10.70
4	606	10.10
5	654	10.90
6	708	11.80
Average Compressive Strength		10.78

Average Compressive Strength:	**10.78**

Standard Deviation	**0.58**

Note: Results relate only to tested samples

DIF-LAB-CSDMBR-05-00/Rev-01

CERTIFICATE OF COMPLIANCE

DETERMINATION OF COMPRESSIVE STRENGTH OF CONCRETE BLOCKS/ SANDWICH BLOCKS AS PER DMS PART 1, 4 & 5

Certificate No:	*CL16020289*		
Product Type:	Normal Weight Concrete Hollow Blocks		
Product Size:	400 * 200 * 200		
Production Date:	12/09/2017	Test Date:	30/10/2017
Sampling Date:	13/09/2017	Certificate Date:	31/10/2017
Lot Number:	*17830833*		

Average Dimensions (mm)		
Length	Width	Height
400.00	200.00	200.00

Compressive Strength (N/mm^2)		
Sample No.	Failure Load (kN)	Individual Strength (N/mm^2)
1	800	10.00
2	808	10.10
3	816	10.20
4	816	10.20
5	808	10.10
6	800	10.00
Average Compressive Strength		10.10

Average Compressive Strength:	**10.10**

Standard Deviation	**0.09**

DIF-LAB-CSDMBR-05-00/Rev-01

CERTIFICATE OF COMPLIANCE

DETERMINATION OF COMPRESSIVE STRENGTH OF CONCRETE BLOCKS/ SANDWICH BLOCKS AS PER DMS PART 1, 4 & 5

Certificate No:	*CL16020289*		
Product Type:	Normal Weight Concrete Solid Blocks		
Product Size:	400 * 100 * 200		
Production Date:	26/08/2017	Test Date:	30/09/2017
Sampling Date:	27/08/2017	Certificate Date:	01/10/2017
Lot Number:	*17830731*		

Average Dimensions (mm)		
Length	Width	Height
400.00	100.00	200.00

Compressive Strength (N/mm²)		
Sample No.	Failure Load (kN)	Individual Strength (N/mm²)
1	584	14.60
2	560	14.00
3	568	14.20
4	592	14.80
5	628	15.70
6	620	15.50
Average Compressive Strength		14.80

Average Compressive Strength:	**14.80**
Standard Deviation	**0.68**

Note: Results relate only to tested samples

DIF-LAB-CSDMBR-05-00/Rev-01

CERTIFICATE OF COMPLIANCE

DETERMINATION OF COMPRESSIVE STRENGTH OF CONCRETE BLOCKS/ SANDWICH BLOCKS AS PER DMS PART 1, 4 & 5

Certificate No:	*CL16020289*		
Product Type:	Normal Weight Concrete Solid Blocks		
Product Size:	400 * 200 * 200		
Production Date:	07/09/2017	Test Date:	25/10/2017
Sampling Date:	08/09/2017	Certificate Date:	26/10/2017
Lot Number:	*17830815*		

Average Dimensions (mm)		
Length	Width	Height
400.00	200.00	200.00

Compressive Strength (N/mm²)		
Sample No.	Failure Load (kN)	Individual Strength (N/mm²)
1	1280	16.00
2	1296	16.20
3	1280	16.00
4	1288	16.10
5	1296	16.20
6	1288	16.10
Average Compressive Strength		16.10

Average Compressive Strength:	**16.10**

Standard Deviation	**0.09**

DIF-LAB-CSDMBR-05-00/Rev-01

PRODUCT CONFORMITY

PRODUCT CONFORMITY

PRODUCT CONFORMITY

CERTIFICATE OF COMPLIANCE

DETERMINATION OF COMPRESSIVE STRENGTH OF CONCRETE THERMAL SANDWICH BLOCKS AS PER DMS PART 1, 4 & 5

Certificate No:	CL16020291		
Product Type:	Thermal Thin Cavities Normal Weight Sandwich Blocks (60mm Insert)		
Product Size:	400 * 200 * 200		
Production Date:	26/09/2017	Test Date:	19/10/2017
Sampling Date:	27/09/2017	Certificate Date:	20/10/2017
Lot Number:	17830792		

Average Dimensions (mm)		
Length	Width	Height
400.00	200.00	200.00

Compressive Strength (N/mm^2)		
Sample No.	Failure Load (kN)	Individual Strength (N/mm^2)
1	800	10.00
2	784	9.80
3	776	9.70
4	792	9.90
5	784	9.80
6	776	9.70
Average		9.82

Average Compressive Strength:	9.82

Standard Deviation	0.12

Note: Results relate only to tested samples

DIF-LAB-CSDMBR-05-00/Rev-01

CERTIFICATE OF COMPLIANCE

DETERMINATION OF COMPRESSIVE STRENGTH OF CONCRETE THERMAL SANDWICH BLOCKS AS PER DMS PART 1, 4 & 5

Certificate No:	*CL16020291*		
Product Type:	Thermal Thick Cavities Normal Weight Sandwich Blocks (60mm Insert)		
Product Size:	400 * 250 * 200		
Production Date:	09/10/2017	Test Date:	28/10/2017
Sampling Date:	10/10/2017	Certificate Date:	29/10/2017
Lot Number:	*17830821*		

Average Dimensions (mm)		
Length	Width	Height
400.00	250.00	200.00

Compressive Strength (N/mm^2)		
Sample No.	Failure Load (kN)	Individual Strength (N/mm^2)
1	1000	10.00
2	980	9.80
3	990	9.90
4	980	9.80
5	1000	10.00
6	970	9.70
Average		9.87

Average Compressive Strength:	9.87

Standard Deviation	0.12

Note: Results relate only to tested samples

DIF-LAB-CSDM8R-05-00/Rev-01

CERTIFICATE OF COMPLIANCE

DETERMINATION OF COMPRESSIVE STRENGTH OF CONCRETE THERMAL SANDWICH BLOCKS AS PER DMS PART 1, 4 & 5

Certificate No:	*CL16020291*		
Product Type:	Thermal Thin Cavities Normal Weight Sandwich Blocks (160mm Insert)		
Product Size:	400 * 300 * 200		
Production Date:	01/03/2016	Test Date:	31/10/2017
Sampling Date:	02/03/2016	Certificate Date:	01/11/2017
Lot Number:	*17830838*		

Average Dimensions (mm)		
Length	Width	Height
400.00	300.00	200.00

Compressive Strength (N/mm^2)		
Sample No.	Failure Load (kN)	Individual Strength (N/mm^2)
1	1008	8.40
2	1044	8.70
3	1020	8.50
4	1008	8.40
5	1032	8.60
6	1020	8.50
Average		8.52

Average Compressive Strength:	**8.52**

Standard Deviation	0.12

Note: Results relate only to tested samples

DIF-LAB-CSDMBR-05-00/Rev-01

PRODUCT CONFORMITY

PRODUCT CONFORMITY

PRODUCT CONFORMITY

The Towers FZ - LLC	GS	MBCC

Proposed Building (3B+G+21+Roof)
Plot No. IMPZ.K.15 at Me'Aisem First Dubai, UAE

CLIENT	CONSULTANT	CONTRACTOR
THE TOWERS FZ - LLC	GOLDEN SQUARE ENGINEERING CONSULTANTS	MODERN BUILDING CONTRACTING COMPANY

REF NO	PRE-QUALIFICATION SUBMITTAL	DATE
SC/IMPZ/PQ/0005		23-May-18

Sub contractor Name & Stamp	Contract Ref
HUB TEC Building Materials	

Scope of Work

Civil Material Works

Item Description:	Pre-Qualification Document	GOLDEN SQUARE ENGINEERING CONSULTANTS
Supplier / Manufacturer:		
Engr. Loai Sommad Contractor's Name & Stamp	23/05/2018 Contractor's Sign & Date	23 MAY 2018 RECEIVED Consultant's Receipt Sign & Date

For Consultant's use

The above submittal is: o Approved ✓ Approved as Noted o Resubmit o Rejected

Comments

1. Delivered material should be complied with DM requirement.
2. Test certificates are to be provided for all type of materials
3. Materials are to be used should be complied with the project requirement and specifications.

Engr. Alaa Faiq Name,Sign, Date & Stamp Resident Engineer	27/5/2018 Name,Sign & Date Discipline Engineer	28.05.18 Name,Sign, Date & Stamp Contractor Receiving

TILE GLUE & TILE GROUT

Dubai Central Laboratory

Construction Materials Laboratory Section - Chemical Analysis Unit

TEST REPORT

VOC CONT.OF ADHESIVES/SEALANTS/VARIOUS MATERIALS

Report No:	**100295495**	**Request No:**	**EMTX-2018-083716**
Project No:	CS-138	**Report Date:**	18/10/2018
Project Name:	HUB TEC BUILDING MATERIALS		
Consultant:	DUBAI MUNICIPALITY		
Contractor:	HUB TEC BUILDING MATERIALS		
Location:	Factory Warehouse		
Source:	NOT GIVEN		
Sample Description:	ADHESIVE		
Sampling Date/Time:	20/09/2018 10:30 AM	**Lot Number:**	GROW004032018
Receiving Date/Time:	08/10/2018 08:00 AM	**Lot Size:**	10.000 kilogram
Sample Size:	1 kilogram	**Sender No:**	AI7608
Material/Mix type:		**Laying Date/Production Date:**	04/03/2018
Nominal Size / Working Block Size L * T * H (mm) :			

TEST RESULTS

PARAMETERS	RESULTS
VOC Content in g/L	4

Sampled By:	ABOOBACKER MOIDEENKUTTY	**Tested By:**	RAMAKM
Samples Brought By:	ABOOBACKER MOIDEENKUTTY	**Testing Date:**	09/10/2018 11:08 AM
Sampling Method:	DCL-IC-99	**Sampling Report No:**	
Test Method:	DMS-0033:2016	**Test Method Variation:**	NIL
Remarks:	PRODUCT NAME: Hub Tec Tile Grout		

To verify this document please go to **http://login.dm.gov.ae/wps/portal/documentverification** and Enter Document ID: **EMTX-2018-083716** and Verification Code: **345-666** or scan the QR code below.

This Report is computer approved and authorized by Chemical Analysis Unit
It does not require any signature

DAC
LB-014

P.O. BOX: 67 DUBAI, TEL : 00971-4-3369900, FAX : 00971-4-3366399
E-mail: labs@dm.gov.ae Website: http://www.dm.gov.ae

GOVERNMENT OF DUBAI

DUBAI MUNICIPALITY

DUBAI CENTRAL LABORATORY DEPARTMENT

TYPE 1 CERTIFICATION - EVALUATION REPORT

EVALUATION REPORT NO.	**RA18051603**
DATE:	**23rd OCTOBER 2018**
COMPANY NAME	**HUB TEC BUILDING MATERIALS**
PRODUCT DESCRIPTION	**ADHESIVE, TILE GROUT**
REFERENCE STANDARD	DM-DCLD-RD-DP32-5109 (IC) Specific Rules for for Type 1 Certification of VOC of Adhesives and Sealants as per Clause [404.02] 2017Al Sa'fat Dubai Green Building Evaluation System
SAMPLE ID NO.	**AI7608**
APPLICATION NO.	**BBCE-2018-004293**

DETAILS OF EVALUATION:

REQUIREMENT	STANDARD CRITERIA	RESULT	TESTING LABORATORY	TEST REPORT NO.	REMARKS
Volatile Organic Compounds (VOC)	Special purpose contact Adhesive (250 g/l) (max)	4 g/L	Dubai Central Laboratory as per Test Request No. EMTX-2018-083716	100295495	Passed

FINAL RECOMMENDATION	
Since the above test results satisfactorily complied with the minimum requirements of System 1 Product Certification Specific Rules for Adhesives / Sealants in accordance with the 2017 Al Safat Green Building Evaluation System, issuance of Certificate of Product Conformity on the above mentioned product is hereby recommended.	
EVALUATED BY	NOTED & APPROVED BY
*(SGD)ABOOBACKER MOIDEENKUTTY Principal Quality Products Inspector	*(SGD)NEDA'A M. G. AL ALAWADHI Head, Product Conformity Assessment Unit
Date: : **23rd OCTOBER 2018**	Date: : **23rd OCTOBER 2018**

** This is an electronic document. No signatures are required.*

Page 1 of 1 F-IC-5004 R3

حكومة دبي
GOVERNMENT OF DUBAI

عام زايد YEAR OF ZAYED

بلدية دبي
DUBAI MUNICIPALITY

TYPE 1B CERTIFICATE OF PRODUCT CONFORMITY

ISSUED TO	:	HUB TEC BUILDING MATERIALS Dubai
PRODUCT DESCRIPTION	:	ADHESIVES HUB TEC TILE GROUT, Quantity :10,000kg
BATCH/LOT NO.	:	**GROW004032018**
STANDARD SPECIFICATION	:	GBRS Clause 404.02 (Adhesives and Sealants)
TITLE OF STANDARD	:	Type 1 Certification of VOC Adhesives and Sealants (GBRS)
SPECIFIC RULES NO.	:	RD-DP32-5109 (IC)
EVALUATION REPORT NO.	:	RA18051603
SAMPLE ID.NO./SENDER NO.	:	AI7608

ATTESTATION

Dubai Central Laboratory Department hereby attests that the product as described above conforms to the requirements of the standard specification as mentioned.

This attestation is based on the results of tests conducted on samples selected from the above product using a sampling procedure given in the specific rules and evaluated as per attached Evaluation Report. It is applicable only to the Batch/Lot Number of the product as described in this certificate and does not cover the entire production of the factory.

DAC
CB-003-PRD

DCL
PRODUCT CONFORMITY

ARIF HUSAIN AL MARZOOQI
Head of Products Conformity Assessment Section
Dubai Central Laboratory Department

Certificate No: BBCE-2018-004293
Date Issued: 01/11/2018
Valid Until: 31/01/2019

This certification is in accordance with Certification Scheme Type 1b as described in ISO/IEC 17067 2012 "Conformity assessment- Fundamentals of product certification and guidelines for product certification scheme " .

This certificate shall not be reproduced except in full and any alteration on this document will invalidate this certificate. The Evaluation Report mentioned above forms an integral part of this Certificate

Dubai Central Laboratory Department, P.O. Box 67,Zaabeel Road, Al Karama, Dubai. UAE

F-IC-5005 Rev 8

This Document is electronically approved and does not required a signature.
To verify the authenticity of this document please visit http://login.dm.gov.ae/wps/portal/documentverification and enter the Document ID BBCE-2018-004293 and Verification Code 229009,or alternatively scan the QR code.

هذا المستند معتمد الكترونيا ولا يحتاج الى توقيع
للتحقق من صحة هذه الوثيقة يرجى زيارة
http://login.dm.gov.ae/wps/portal/documentverification ar
ثم أدخل معرف السند BBCE-2018-004293
وكود التأكيد 229009 او بدلا من ذلك مسح QR code

Al Futtaim Exova LLC
Dubai Investments Park
P.O. Box 34924, Dubai
United Arab Emirates

T: +971 (0)4 885 1001
F: +971 (0)4 885 4004
E: dubai.lab@exova.com
W: www.exova.com

Testing, calibrating, advising

REPORT OF TESTS

Description	One Sample of Hub Tec Grout		
Tested for	Hub Tech Building Materials (L.L.C), Dubai, U.A.E		
Lab Ref. No.	WR14-10364 (Page 1 of 3)	Request No.	D14-05510
Date Received	23.10.2014	Date Reported	04.12.2014

Client's ref. : Requisition dated 23.10.2014

1.0 Introduction

Further to the test work instructions received from the client, dated 23.10.2014, one sample of Hub Tec Grout has been tested for the following by Al Futtaim Exova LLC;

1.1 Compressive Strength
1.2 Pull Off Strength

2.0 Sample Reference

Sample reference	Hub Tech Grout
Source	Hub Tech Building Materials (L.L.C), Dubai, U.A.E
Sampled submitted by	Hub Tech Building Materials (L.L.C), Dubai, U.A.E
AFE sample no.	D14-05510/01

3.0 Results

Results are given on the attached sheet.

(15)
Al Futtaim Exova LLC
P.O. Box 34924, Dubai, United Arab Emirates
Tel:+971 (0)4 885 1001 Fax:+971 (0)4 885 4004

Results

Sample reference : Hub Tech Grout
AFE sample No. : D14-05510/01

3.1 Compressive Strength

Test Method: Test specimens were prepared with the supplied sample and cured at a temperature of 23±2° C. After curing, the test was carried out in accordance with ASTM C 109.

Test Ref. No	Age of Test	Max. Load (kN)	Compressive Strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	7 days	37.0	14.8	15.4
2		40.1	16.0	
3		38.6	15.4	
4	28 days	46.5	18.6	19.1
5		48.4	19.4	
6		48.0	19.2	

3.2 Pull off Strength

Test Method : The tests were carried out in general accordance with BS 1881 Part 207 using a 'LOK-TEST' pull out instrument.

The test sample was prepared by applying the supplied sample on the surface of a host concrete block and cured for 7 & 28 days days at a temperature of 23±2°C.

The test procedure involved fixing a 75mm circular steel disc with a threaded inset over the test area. The disc was affixed on to the mortar using a two component epoxy resin. A partial depth circumferential cut was drilled over the test area utilising a water flushed electrically driven 75 mm diameter diamond core tube. The depth of cut extended through the layer of mortar and beyond the bonded interface into the concrete substrate.

After the resin had cured sufficiently an adjustable loading frame was placed and levelled over the test area. The test was then performed using the pull off instrument to apply a tensile force until failure occurred.

Test		1	2	3
Test age		7 days	7 days	7 days
Test position		Vertical	Vertical	Vertical
Cylindrical block (dolly) ref		A	B	C
Area of cylindrical block (mm^2)		4418	4418	4418
Maximum load applied (kN)		2.0	2.0	2.0
Pull off strength (N/mm^2)		0.45	0.45	0.45
Description of the failure	Type of failure	Failure occurred from the concrete substrate.		

Results

Sample reference : Hub Tech Grout
AFE sample No. : D14-05510/01

Pull off Strength (Contd.)

Test		1	2	3
Test age		28 days	28 days	28 days
Test position		Vertical	Vertical	Vertical
Cylindrical block (dolly) ref		A	B	C
Area of cylindrical block (mm^2)		4418	4418	4418
Maximum load applied (kN)		4.0	4.0	4.0
Pull off strength (N/mm^2)		0.91	0.91	0.91
Description of the failure	Type of failure	Failure occurred from the concrete substrate.		

UMAR FAROOK
Products Manager

(15)
Al Futtaim Exova
Al Futtaim Exova LLC
P.O. Box 34924, Dubai, United Arab Emirates
Tel:+971 (0)4 885 1001 Fax:+971 (0)4 885 4004

For and on behalf of Al Futtaim Exova (L.L.C)
Tested by: SSK, Date Tested: 02.11.2014-30.11.2014

ARCHEN
ENGINEERING

CONTRACT: Proposed Factory for Block and Interlock	CLIENT: Gulf Toub Cement LLC
CONSULTANT: Archen Engineering	CONTRACTOR: Rirora Steel Contractor LLC

MATERIAL APPROVAL SHEET

MAS Ref: **Rev:** **Date: 23/11/2016**

Item: HUB TEC TILE ADHESIVE (BEST)

Supplier: **Hub Tec Building Materials** Manufacturer: **Hub Tec Building Materials**

Date on which required at site: As per Requirement

Sample attached:	Yes ■	No ☐
Compliance Statement attached:	Yes ■	No ☐
Certificate attached:	Yes ■	No ☐
Assurance of Delivery on time:	Yes ■	No ☐

Remarks:

ENGINEER:

Above information given by contractor is correct Yes ■ No ☐

Material Recommended ■ Rejected ☐

Recommendation with comments: **Comprehensive strength 1.1**
28 days Test
1.2 pull off strenght
Good Quality

ARCHEN
ENGINEERING
T .971 4 3386311 F .971 4 3386312
P 282104 Dubai, U.A.E.

CONSULTANT:

Name/Signature: 23-11-2016 Date: 23/11/2016

The Towers FZ - LLC	GS	MBCC

Proposed Building (3B+G+21+Roof)
Plot No. IMPZ.K.15 at Me'Aisem First Dubai, UAE

CLIENT	CONSULTANT	CONTRACTOR
THE TOWERS FZ - LLC	GOLDEN SQUARE ENGINEERING CONSULTANTS	MODERN BUILDING CONTRACTING COMPANY

REF NO		DATE
SC/IMPZ/PQ/0005	**PRE-QUALIFICATION SUBMITTAL**	23-May-18

Sub contractor Name & Stamp	Contract Ref
HUB TEC Building Materials	

Scope of Work

Civil Material Works

Item Description:	Pre-Qualification Document	GS جولدن سكوير للاستشارات الهندسية GOLDEN SQUARE ENGINEERING CONSULT
Supplier / Manufacturer:		
Engr. Loai Sommad	23/05/2018	23 MAY 2018 RECEIVED (3B+G+21+R) Plot No IMPZ.K Al Me'Aisem First, Dubai, UAE
Contractor's Name & Stamp	Contractor's Sign & Date	Consultant's Receipt Sign & Date

For Consultant's use

The above submittal is: o Approved ☑ Approved as Noted . o Resubmit o Rejected

Comments

(1) Delivered material should be Complied with DM requirement.
(2) Test certificates are to be provided for all type of materials
(3) Materials are to be used should be complied with the project requirement and specifications.

Engr. Alaa Faiq	27/5/2018	28.05.18
Name,Sign, Date & Stamp Resident Engineer	Name,Sign & Date Discipline Engineer	Name,Sign, Date & Stamp Contractor Receiving

Dubai Central Laboratory

Construction Materials Laboratory Section - Chemical Analysis Unit

TEST REPORT

VOC CONT.OF ADHESIVES/SEALANTS/VARIOUS MATERIALS

Report No:	**100294997**	**Request No:**	**EMTX-2018-083707**
Project No:	CS-138	**Report Date:**	17/10/2018
Project Name:	HUB TEC BUILDING MATERIALS		
Consultant:	DUBAI MUNICIPALITY		
Contractor:	HUB TEC BUILDING MATERIALS		
Location:	FACTORY WAREHOUSE		
Source:	NOT GIVEN		
Sample Description:	ADHESIVE		
Sampling Date/Time:	20/09/2018 10:00 AM	**Lot Number:**	GLU003032018
Receiving Date/Time:	08/10/2018 08:00 AM	**Lot Size:**	10.000 kilogram
Sample Size:	1 kilogram	**Sender No:**	AI7607
Material/Mix type:		**Laying Date/Production Date:**	03/03/2018
Nominal Size / Working Block Size L * T * H (mm) :			

TEST RESULTS

PARAMETERS	RESULTS
VOC Content in g/L	4

Sampled By:	ABOOBACKER MOIDEENKUTTY	**Tested By:**	RAMAKM
Samples Brought By:	ABOOBACKER MOIDEENKUTTY	**Testing Date:**	09/10/2018 11:08 AM
Sampling Method:	DCL-IC-99	**Sampling Report No:**	
Test Method:	DMS-0033:2016	**Test Method Variation:**	NIL
Remarks:	PRODUCT NAME: Hub Tec Tile Glue Best		

To verify this document please go to **http://login.dm.gov.ae/wps/portal/documentverification** and Enter Document ID: **EMTX-2018-083707** and Verification Code: **345-665** or scan the QR code below.

This Report is computer approved and authorized by Chemical Analysis Unit
It does not require any signature

DAC LB-014

P.O. BOX: 67 DUBAI, TEL : 00971-4-3369900, FAX : 00971-4-3366399
E-mail: labs@dm.gov.ae Website: http://www.dm.gov.ae

GOVERNMENT OF DUBAI

DUBAI MUNICIPALITY

DUBAI CENTRAL LABORATORY DEPARTMENT

TYPE 1 CERTIFICATION - EVALUATION REPORT

EVALUATION REPORT NO.	**RA18051602**
DATE:	**23rd OCTOBER 2018**
COMPANY NAME	**HUB TEC BUILDING MATERIALS**
PRODUCT DESCRIPTION	**ADHESIVE, BUB TEC TILE GLUE BEST**
REFERENCE STANDARD	DM-DCLD-RD-DP32-5109 (IC) Specific Rules for for Type 1 Certification of VOC of Adhesives and Sealants as per Clause [404.02] 2017Al Sa'fat Dubai Green Building Evaluation System
SAMPLE ID NO.	**AI7607**
APPLICATION NO.	**BBCE-2018-004292**

DETAILS OF EVALUATION:

REQUIREMENT	STANDARD CRITERIA	RESULT	TESTING LABORATORY	TEST REPORT NO.	REMARKS
Volatile Organic Compounds (VOC)	Special purpose contact Adhesive (250 g/l) (max)	4 g/L	Dubai Central Laboratory as per Test Request No. EMTX-2018-083707	100294997	Passed

FINAL RECOMMENDATION	
Since the above test results satisfactorily complied with the minimum requirements of System 1 Product Certification Specific Rules for Adhesives / Sealants in accordance with the 2017 Al Safat Green Building Evaluation System, issuance of Certificate of Product Conformity on the above mentioned product is hereby recommended.	
EVALUATED BY	NOTED & APPROVED BY
*(SGD)ABOOBACKER MOIDEENKUTTY Principal Quality Products Inspector	*(SGD)NEDA'A M. G. AL ALAWADHI Head, Product Conformity Assessment Unit
Date: : **23rd OCTOBER 2018**	Date: : **23rd OCTOBER 2018**

** This is an electronic document. No signatures are required.*

F-IC-5004 R3

حكومة دبي
GOVERNMENT OF DUBAI

عام زايد YEAR OF ZAYED

بلدية دبي
DUBAI MUNICIPALITY

TYPE 1B CERTIFICATE OF PRODUCT CONFORMITY

ISSUED TO	:	HUB TEC BUILDING MATERIALS Dubai
PRODUCT DESCRIPTION	:	ADHESIVES HUB TEC TILE GLUE BEST, Quantity : 10,000kg
BATCH/LOT NO.	:	**GLU003032018**
STANDARD SPECIFICATION	:	GBRS Clause 404.02 (Adhesives and Sealants)
TITLE OF STANDARD	:	Type 1 Certification of VOC Adhesives and Sealants (GBRS)
SPECIFIC RULES NO.	:	RD-DP32-5109 (IC)
EVALUATION REPORT NO.	:	RA18051602
SAMPLE ID.NO./SENDER NO.	:	AI7607

ATTESTATION

Dubai Central Laboratory Department hereby attests that the product as described above conforms to the requirements of the standard specification as mentioned.

This attestation is based on the results of tests conducted on samples selected from the above product using a sampling procedure given in the specific rules and evaluated as per attached Evaluation Report. It is applicable only to the Batch/Lot Number of the product as described in this certificate and does not cover the entire production of the factory.

DAC
CB-003-PRD

DCL
PRODUCT CONFORMITY

ARIF HUSAIN AL MARZOOQI
Head of Products Conformity Assessment Section
Dubai Central Laboratory Department

Certificate No: BBCE-2018-004292
Date Issued: 01/11/2018
Valid Until: 31/01/2019

This certification is in accordance with Certification Scheme Type 1b as described in ISO/IEC 17067 2012 "Conformity assessment- Fundamentals of product certification and guidelines for product certification scheme " .

This certificate shall not be reproduced except in full and any alteration on this document will invalidate this certificate. The Evaluation Report mentioned above forms an integral part of this Certificate

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للتحقق من صحة هذه الوثيقة يرجى زيارة
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ثم أدخل معرف السند BBCE-2018-004292
وكود التأكيد 775863 او بدلا من ذلك مسح QR code

Al Futtaim Exova LLC
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W: www.exova.com

Testing, calibrating, advising

REPORT OF TESTS

Description	One Sample of Best Glue		
Tested for	Hub Tech Building Materials (L.L.C), Dubai, U.A.E		
Lab Ref. No.	WR14-10365 (Page 1 of 3)	Request No.	D14-05510
Date Received	23.10.2016	Date Reported	04.12.2016

Client's ref. : Requisition dated 23.10.2014

1.0 Introduction

Further to the test work instructions received from the client, dated 23.10.2014, one sample of Best Glue has been tested for the following by Al Futtaim Exova LLC;

1.1 Compressive Strength
1.2 Pull Off Strength

2.0 Sample Reference

Sample reference	Best Glue
Source	Hub Tech Building Materials (L.L.C), Dubai, U.A.E
Sampled submitted by	Hub Tech Building Materials (L.L.C), Dubai, U.A.E
AFE sample no.	D14-05510/02

3.0 Results

Results are given on the attached sheet.

Results

Sample reference : Best Glue
AFE sample No. : D14-05510/02

3.1 Compressive Strength

Test Method: Test specimens were prepared with the supplied sample and cured at a temperature of 23±2° C. After curing, the test was carried out in accordance with ASTM C 109.

Test Ref. No	Age of Test	Max. Load (kN)	Compressive Strength (N/mm²)	Average Compressive Strength (N/mm²)
1	7 days	10.2	4.1	3.9
2		9.6	3.8	
3		9.2	3.7	
4	28 days	20.5	8.2	8.2
5		21.6	8.6	
6		19.4	7.8	

3.2 Pull off Strength

Test Method : The tests were carried out in general accordance with BS 1881 Part 207 using a 'LOK-TEST' pull out instrument.

The test sample was prepared by applying the supplied sample on the surface of a host concrete block and cured for 7 & 28 days at a temperature of 23±2°C.

The test procedure involved fixing a 75mm circular steel disc with a threaded inset over the test area. The disc was affixed on to the mortar using a two component epoxy resin. A partial depth circumferential cut was drilled over the test area utilising a water flushed electrically driven 75 mm diameter diamond core tube. The depth of cut extended through the layer of mortar and beyond the bonded interface into the concrete substrate.

After the resin had cured sufficiently an adjustable loading frame was placed and levelled over the test area. The test was then performed using the pull off instrument to apply a tensile force until failure occurred.

Test		1	2	3
Age of test		7 days	7 days	7 days
Test position		Vertical	Vertical	Vertical
Cylindrical block (dolly) ref		A	B	C
Area of cylindrical block (mm²)		4418	4418	4418
Maximum load applied (kN)		1.0	1.0	1.0
Pull off strength (N/mm²)		0.23	0.23	0.23
Description of the failure	Type of failure	Failure occurred from the system (Glue)		

Results

Sample reference : Best Glue
AFE sample No. : D14-05510/02

Pull off Strength (Contd.)

Test		1	2	3
Test age		28 days	28 days	28 days
Test position		Vertical	Vertical	Vertical
Cylindrical block (dolly) ref		A	B	C
Area of cylindrical block (mm^2)		4418	4418	4418
Maximum load applied (kN)		2.0	2.0	2.0
Pull off strength (N/mm^2)		0.45	0.45	0.45
Description of the failure	Type of failure	Failure occurred from the system (Glue)		

For and on behalf of Al Futtaim Exova (L.L.C)
Tested by: SSK, Date Tested: 02.11.2014-30.11.2014

A. UMAR FAROOK
Marketing & Consumer Products Manager

Al Futtaim Exova
Al Futtaim Exova LLC

The Towers FZ - LLC	GS	MBTC

Proposed Building (3B+G+21+Roof)
Plot No. IMPZ.K.15 at Me'Aisem First Dubai, UAE

CLIENT	CONSULTANT	CONTRACTOR
THE TOWERS FZ - LLC	GOLDEN SQUARE ENGINEERING CONSULTANTS	MODERN BUILDING CONTRACTING COMPANY

REF NO	PRE-QUALIFICATION SUBMITTAL	DATE
SC/IMPZ/PQ/0005		23-May-18

Sub contractor Name & Stamp	Contract Ref
HUB TEC Building Materials	

Scope of Work

Civil Material Works

Item Description:	Pre-Qualification Document	GS GOLDEN SQUARE ENGINEERING CONSULTANTS
Supplier / Manufacturer:		
Engr. Loai Sommad Contractor's Name & Stamp	23/05/2018 Contractor's Sign & Date	23 MAY 2018 RECEIVED Consultant's Receipt Sign & Date

For Consultant's use

The above submittal is: o Approved o Approved as Noted o Resubmit o Rejected

Comments

1. Delivered material should be complied with DM requirement.
2. Test certificates are to be provided for all type of materials
3. Materials are to be used should be complied with the project requirement and specifications.

Engr. Alaa Faiq Name, Sign, Date & Stamp Resident Engineer	27/5/2018 Name, Sign & Date Discipline Engineer	28.05.18 Name, Sign, Date & Stamp Contractor Receiving

Al Futtaim Exova LLC
Dubai Investments Park
P.O. Box 34924, Dubai
United Arab Emirates

T: +971 (0)4 885 1001
F: +971 (0)4 885 4004
E: dubai.lab@exova.com
W: www.exova.com

Testing, calibrating, advising

REPORT OF TESTS

Description	One Sample of Hub Tec Tile Glue		
Tested for	Hub Tech Building Materials (L.L.C), Dubai, U.A.E		
Lab Ref. No.	WR14-10366 (Page 1 of 3)	Request No.	D14-05510
Date Received	23.10.2014	Date Reported	04.12.2014

Client's ref. : Requisition dated 23.10.2014

1.0 Introduction

Further to the test work instructions received from the client, dated 23.10.2014, one sample of Hub Tec Tile Glue has been tested for the following by Al Futtaim Exova LLC;

1.1 Compressive Strength
1.2 Pull Off Strength

2.0 Sample Reference

Sample reference	Hub Tec Tile Glue
Source	Hub Tech Building Materials (L.L.C), Dubai, U.A.E
Sampled submitted by	Hub Tech Building Materials (L.L.C), Dubai, U.A.E
AFE sample no.	D14-05510/03

3.0 Results

Results are given on the attached sheet.

Results

Sample reference : Hub Tec Tile Glue
AFE sample No. : D14-05510/03

3.1 Compressive Strength

Test Method: Test specimens were prepared with the supplied sample and cured at a temperature of 23±2° C. After curing, the test was carried out in accordance with ASTM C 109.

Test Ref. No	Age of Test	Max. Load (kN)	Compressive Strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	7 days	7.5	3.0	**3.2**
2		8.6	3.4	
3		8.3	3.3	
4	28 days	21.0	8.4	**8.0**
5		20.3	8.1	
6		18.6	7.4	

3.2 Pull off Strength

Test Method : The tests were carried out in general accordance with BS 1881 Part 207 using a 'LOK-TEST' pull out instrument.

The test sample was prepared by applying the supplied sample on the surface of a host concrete block and cured for 7 & 28 days at a temperature of 23±2°C.

The test procedure involved fixing a 75mm circular steel disc with a threaded inset over the test area. The disc was affixed on to the mortar using a two component epoxy resin. A partial depth circumferential cut was drilled over the test area utilising a water flushed electrically driven 75 mm diameter diamond core tube. The depth of cut extended through the layer of mortar and beyond the bonded interface into the concrete substrate.

After the resin had cured sufficiently an adjustable loading frame was placed and levelled over the test area. The test was then performed using the pull off instrument to apply a tensile force until failure occurred.

Test		1	2	3
Age of test		7 days	7 days	7 days
Test position		Vertical	Vertical	Vertical
Cylindrical block (dolly) ref		A	B	C
Area of cylindrical block (mm^2)		4418	4418	4418
Maximum load applied (kN)		1.0	1.0	1.0
Pull off strength (N/mm^2)		0.23	0.23	0.23
Description of the failure	**Type of failure**	Failure occurred from the system (Tile glue)		

(15)

Al Futtaim Exova LLC
P.O. Box 34924, Dubai, United Arab Emirates

Results

Sample reference : Hub Tec Tile Glue
AFE sample No. : D14-05510/03

Pull off Strength (Contd.)

Test		1	2	3
Test age		28 days	28 days	28 days
Test position		Vertical	Vertical	Vertical
Cylindrical block (dolly) ref		A	B	C
Area of cylindrical block (mm^2)		4418	4418	4418
Maximum load applied (kN)		2.0	2.0	2.0
Pull off strength (N/mm^2)		0.45	0.45	0.45
Description of the failure	Type of failure	Failure occurred from the system (Tile glue)		

A. UMAR FAROOK
...on & Consumer Products Manager

For and on behalf of Al Futtaim Exova (L.L.C)
Tested by: SSK, Date Tested: 03.11.2014-01.12.2014

Al-Futtaim EXOVA
Al Futtaim Exova LLC
P.O. Box 34934, Dubai, United Arab Emirates
Tel:+971 (0)4 885 1001 Fax:+971 (0)4 885 4004

The Towers FZ - LLC	GS	MBTC

Proposed Building (3B+G+21+Roof)
Plot No. IMPZ.K.15 at Me'Aisem First Dubai, UAE

CLIENT	CONSULTANT	CONTRACTOR
THE TOWERS FZ - LLC	GOLDEN SQUARE ENGINEERING CONSULTANTS	MODERN BUILDING CONTRACTING COMPANY

REF NO	PRE-QUALIFICATION SUBMITTAL	DATE
SC/IMPZ/PQ/0005		23-May-18

Sub contractor Name & Stamp	Contract Ref
HUB TEC Building Materials	

Scope of Work

Civil Material Works

Item Description:	Pre-Qualification Document	GS GOLDEN SQUARE ENGINEERING CONSULTANTS
Supplier / Manufacturer:		
Engr. Loai Sommad Contractor's Name & Stamp	23/05/2018 Contractor's Sign & Date	23 MAY 2018 RECEIVED Consultant's Receipt Sign & Date

For Consultant's use

The above submittal is: o Approved o Approved as Noted o Resubmit o Rejected

Comments

1. Delivered material should be complied with DM requirement.
2. Test certificates are to be provided for all type of materials
3. Materials are to be used should be complied with the project requirement and specifications.

Engr. Alaa Faiq Name, Sign, Date & Stamp Resident Engineer	27/5/2018 Name, Sign & Date Discipline Engineer	28.05.18 Name, Sign, Date & Stamp Contractor Receiving

BOND

HUBTEC Building Materials
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Web: www.hubtecdubai.com
Email: info@hubtecdubai.com

HUBTEC BOND PVA
(PVA Bonding Agent/ Multi Purpose Adhesive/ Surface Sealer)

DESCRIPTION

HUBTEC BOND PVA is derived from plasticized polyvinyl acetate emulsion for use in the building industry as an adhesive and additive to concrete and plasters and as a universal bonding agent and admixture for cement.

ADVANTAGES

It is a universal bonding agent, easy to apply, good adhesion and excellent abrasion resistance/elasticity. It is designed to be used for gulf condition. Numerous applications from one product. Economical and simple to use.

METHOD OF USE

- **As General Purpose Adhesive**- use undiluted.
- **As Surface Sealer**- one part of ***HUBTEC BOND PVA*** with four parts of sweet water (1:4 dilutions).
- **As Plaster Bonding Agent**- use diluted 1:2, one part of ***HUBTEC BOND PVA*** with two parts of water.
- **As Concrete Additive**- use 20-30 liters of ***HUBTEC BOND PVA*** for 100kg cement.
- **As A Bonding Agent for Tiles**- seal with a solution of one part of ***HUBTEC BOND PVA*** to five parts of water. Before bedding in tiles, apply to floor and base of tiles; apply to floor and base of tiles a solution of three parts of ***HUBTEC BOND PVA*** to one part of water.

BONDING NEW CONCRETE TO OLD

Ensure the substrate is clean and free from oil and grease. Apply a sealing coat of ***HUBTEC BOND PVA*** diluted with four parts of sweet water and allow drying.

Apply a bonding coat of ***HUBTEC BOND PVA*** diluted with an equal ratio of water and lay the new concrete while this coat is still tacky. For maximum bond strength add 5-10 liters of ***HUBTEC BOND PVA*** per 100kg of cement.

FOR CEMENT SCREEDS AND RENDERING, PLASTERS etc.

The back ground must be sound since the adhesion of the mortar to the floor; wall or ceiling will only be as good as the substrate.
Remove all flaking and cracking paint, plasters etc, from the substrate. It must be stable, thoroughly clean, and free from oil and grease.
Seal the surface using one part of ***HUBTEC BOND PVA*** to four parts of water. Allow this to dry, and then apply a bonding coat of one part of ***HUBTEC BOND PVA*** diluted two parts of water (1:1 on low porosity surfaces). Screed

plaster or render on the tacky bonding coat using normal techniques. Cure cementations screeds and renders properly.

HEALTH AND SAFETY

As with all chemicals, caution should always be exercised. Protective clothing such as gloves and goggles should be worn.

INHALATION: inhalation of vapor or mist should be avoided. If inhaled symptoms include coughing, wheezing, laryngitis, and vomiting. Immediately shift victim to fresh air, and if needed immediately start artificial respiration. Give oxygen if breathing is labored. Get emergency medical help.

EYE CONTACT: Flush eyes with water for 15 minutes and call for medical help.

INGESTION: Causes nausea, vomiting, and loss of consciousness. If accidentally swallowed do not include vomiting rather call for medical help immediately.

SKIN CONTACT: Flush with water or soap and water until all traces have been removed. Seek medical attention if required.

Base Material	**Poly Vinyl Acetate**
Solid Content by weight	**36% +/- 5**
Color	**White**
Viscosity @ 25°C,S6, rpm 20	**10,000-25,000 cps (BROOKFIELD)**
Specific Gravity	**1.20 +/- 0.10**
pH	**5.5-6**
Packing	**20kg./200kg**
Plasticizer	**Plasticized**
Flammability & Toxicity	**None**
Standards	**BS-2354-1974 (ASTM C-631-70)**
Shelf Life	**12 months tightly closed container**

WARRANTY

The information given is based on our knowledge and performance of the material.
Every precaution is taken in the manufacture of the product and responsibility is limited to the quality of supplies with no guarantee of results in the field, as manufacturer has no control over site conditions or execution of work.

The Towers FZ - LLC	GS	

Proposed Building (3B+G+21+Roof)
Plot No. IMPZ.K.15 at Me'Aisem First Dubai, UAE

CLIENT	CONSULTANT	CONTRACTOR
THE TOWERS FZ - LLC	GOLDEN SQUARE ENGINEERING CONSULTANTS	MODERN BUILDING CONTRACTING COMPANY

REF NO	PRE-QUALIFICATION SUBMITTAL	DATE
SC/IMPZ/PQ/0005		23-May-18

Sub contractor Name & Stamp	Contract Ref
HUB TEC Building Materials	

Scope of Work

Civil Material Works

Item Description:	Pre-Qualification Document	GS GOLDEN SQUARE ENGINEERING CONSULTANTS
Supplier / Manufacturer:		
Engr. Loai Sommad Contractor's Name & Stamp	23/05/2018 Contractor's Sign & Date	23 MAY 2018 RECEIVED Consultant's Receipt, Sign & Date

For Consultant's use

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3. Materials are to be used should be complied with the project requirement and specifications.

Engr. Alaa Faiq Name, Sign, Date & Stamp Resident Engineer	27/5/2018 Name, Sign & Date Discipline Engineer	28.05.18 Name, Sign, Date & Stamp Contractor Receiving

MASTIC

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HUBTEC MASTIC

TECHNICAL DATA

(Elastomeric flashing compound)

DESCRIPTION

HUBTEC MASTIC *is* a scientific formulation of water repellant filler, asphalt, special polymer and thixotropic agent and U. V. resistance additive. It is a single component, ready to uses, with excellent adhesion to concrete, brickwork, asphalt and most construction materials.

USES:

HUBTEC MASTIC is universal compound ideal for roof flashing, details, patching of cracks and splits in roofs, repair or flashing details, roof busters, roof curbs, vent pipes, skylights, spouts, wall and foundation. It is also suitable to seal cracks in concrete walls and floors as well as tile joints. Multipurpose Sealing structural joints in concrete pavements, bridges, buildings, etc.

ADVANTAGE:

- Good expansion and contraction properties.
- Good mechanical properties, tensile strength, elongation and resistance.
- Pliable and flexible.
- Stability at high ambient temperatures.
- Excellent adhesion, strong durable bond.
- Economical.
- Single component; does not require mixing, thereby saves time.
- Oxidation resistant and durable.

APPLICATION:

The surface must be cleaned and free from dust, dirt, grease & oil. Over concrete, metal or brittle asphalt surfaces, it does not require any heating or thinning. It can be applied by trowel or putty kn

CLEANING:

Tools : Clean with water when wet.
Clean with kerosene when dry.

Hands : Use a hand cleaner or kerosene followed by soap and water.

COVERAGE:

One course application : 2.5 – 2.6 Kg/M²
Two course application : 4.9 – 5.0 Kg/M²
(Allow 1st course to cure 8 hours before installing 2nd course.

PACKING:

HUBTEC MASTIC is available in 20 Kg. pail and 200 Kgs. drum.

STORAGE:

One year in closed containers stored under moderate temperature (10 - 15°C)

HEALTH & SAFETY INSTRUCTION:

- ***HUBTEC MASTIC*** is water based and non hazardous.
- Use protective clothing, gloves, masks, goggles, etc.
- Avoid contact with skin, eyes or inhalation in such events removes the person to fresh air, with clean water over affected area at first instance and call for medical attention.

TECHNICAL DATA:

	Property	*Typical result*	*Test Method*
1.	Appearance	Thick Paste	
2.	Odour	Organic	
3.	Slump	Nil	
4.	Density at 25°C, Kg/liter	1.0 to 1.2	ASTM D 70
5.	Consistency, Con. Penetration at 25°C, dmm	230-300 depending on grade	ASTM D 217
6.	Dry film thickness, 1 Liter/M², mm	0.65	
7.	Drying time, to touch, at 25°C, Hr.	5(at recommended average)	
8.	Drying time, through. At 25°C, Days	7	
9.	Colour	Black	
10.	Elongation of cured film, %	275 (min)	ASTM D 412
11.	Cold Temperature pliability at 0°C	No cracking or pealing	ASTM D 4586
12.	Resistance to heat at 50°C	No sagging or blistering	ASTM D 4586
13.	Adhesion to dry surfaces	Excellent	ASTM D 3409
14.	Adhesion to wet surfaces	Excellent	ASTM D 3409
15.	Resistance to salt water	Good	-
16.	Resistance to sunlight (UV) (Weather – 0 – Meter 2000 Hrs.)	Pass	ASTM G 53
17.	Resistance to mild acids and alkalis	Good	
18.	Resistance to water	Excellent	ASTM G 53
19.	Service Temperature, °C	0 to 90	
20	Non-volatile,% Wt	67 – 72	ASTM D 4584
21.	Volatile, % Wt	28 – 33	ASTM D 4586

NOTE: *All information is given in good faith on the results gained from experience and tests. However, all recommendations or suggestions are made without guarantee since we don't have any control on site conditions and its uses.*

The Towers FZ - LLC	GS	

Proposed Building (3B+G+21+Roof)
Plot No. IMPZ.K.15 at Me'Aisem First Dubai, UAE

CLIENT	CONSULTANT	CONTRACTOR
THE TOWERS FZ - LLC	GOLDEN SQUARE ENGINEERING CONSULTANTS	MODERN BUILDING CONTRACTING COMPANY

REF NO	PRE-QUALIFICATION SUBMITTAL	DATE
SC/IMPZ/PQ/0005		23-May-18

Sub contractor Name & Stamp	Contract Ref
HUB TEC Building Materials	

Scope of Work

Civil Material Works

Item Description:	Pre-Qualification Document	
Supplier / Manufacturer:		
Engr. Loai Sommad Contractor's Name & Stamp	23/05/2018 Contractor's Sign & Date	23 MAY 2018 RECEIVED Consultant's Receipt Sign & Date

GS GOLDEN SQUARE ENGINEERING CONSULTANTS
Me'Aisem First, Dubai, UAE

For Consultant's use

The above submittal is: o Approved o Approved as Noted o Resubmit o Rejected

Comments

(1) Delivered material should be complied with DM requirement.
(2) Test certificates are to be provided for all type of materials
(3) Materials are to be used should be complied with the project requirement and specifications.

Engr. Alaa Faiq	27/5/2018	28.05.18
Name, Sign, Date & Stamp Resident Engineer	Name, Sign & Date Discipline Engineer	Name, Sign, Date & Stamp Contractor Receiving

WATERPROOF

Project Name:	RICH REIT TOWER	Project Code:	345-14
Technical Submittal		Ref. No.	TS /MAS 201 Rev. / 0
		Date:	30/10/2017
Description of Submittal :	*Hubtec Waterproofing* *high quality water proofing Membrane*	Required By:	MAIN CONTRACTOR
		Division:	Mechanical

Enclosed:

- ☐ Calculations
- ☐ Compliance Statem
- ☐ Material Approval
- ☐ Method Statement
- ☐ O & M Manual (Prel.)
- ☐ O & M Manual (Final)
- ☑ Samples
- ☐ Schedules
- ☑ Technical Data
- ☐ Test Reports
- ☐ Warranty
- ☐ Others (Specify) _____ _____

Issued For:

- ☑ Approval
- ☐ Info & Records Only

Subcontractor Name: XBOND chemicals (multi tech ind.)

Construction Manager: (Name/ Signature/ Date)	*Received by NEB: (Name/ Signature/ Date)*
30/10/2017	
Mr. Eyad Almaleh — *DATE*	

Hubtec Water Proofing with high qualuity water proofing membrane for the wet areas

REVIEW STATUS

- ☐ A. Approved
- ☑ B. Approved As Noted
- ☐ C. Revise and Resubmit
- ☐ D. Not Approved

NEB Engineer's Representative Comments:

* Subject for performance at site
* The main contractor is full responsibility for any leakage at further

NEB Engineer's Representative: (Name/ Signature/ Date)	*Received by Contractor: (Name/ Signature/ Date)*
30-10-2017	RECEIVED 30 OCT 2017

Client's / Representative Comments:

Name	*Signature/Date*

Corrections or comments made relative to submittals during this review do not relieve the contractor from compliance with the contract requirements and specifications. This check is only for review of general conformance with the design concept of the project and general compliance with the information given in the contract documents and no time and/or cost implication shall be granted due to the Engineer 's /PM

NEB-SF50 Rev.02

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HUBTEC WATERPROOF
(High Quality Water Proofing Membrane)

DESCRIPTION:

HUBTEC-WATERPROOF is a special synthetic resin based water proof coating. Because of its excellent flexibility and thixotropic nature is an ideal for use on vertical as well as horizontal surfaces. It is single pack, very economical and pollution free water proof coating. Due to its white colour, it has excellent solar insulation capacity.

ADVANTAGES:

- Life and durability of the structure is increased.
- Easy application, no machinery required.
- Light weight compared to conventional roofing systems, thereby loading on the roofs is reduced.
- Provides seamless and joint free seal throughout the surface, which is impervious to water.
- Lower labour cost due to easy, simple and quick application, leading to quick completion and time saving.
- Provides insulation due to solar reflection.
- Excellent bonding to most building materials.
- It provide protective membrane for polyurethane foam insulation.

FIELED OF APPLICATION / USES:

- Water proofing of plaza, car park deck.
- Water proofing cum decorating of external plastered walls.
- Water proofing of new surfaces as well as for the repairs of old surface, whether previously treated or not.
- Suitable for horizontal as well as vertical surfaces like flashings.
- Water proofing of roof slabs, terraces, balconies, sun shades (chajjas), parapet walls, etc.
- Water proofing of flashing, roof edgings, gulley's, steeply pitched designs, etc.
- HUBTEC -WATERPROOF -provides additional water proofing and protection when used as base and/or intermediate coat in brick bat coba and/or IPS floorings.
- HUBTEC -WATERPROOF is optimally suitable for application on structures having complicated geometry like domes, arches, shells, folded plates, paraboloids, corrugated sheets, etc.
- For garden, swimming pools, basement, sandwich application is recommended. For details, refer our technical department.

APPLICATION INSTRUCTIONS:

Surface should be free from oil, grease and loose particles. In case of metal surface, remove rust and contamination for better protection, If the surface has been already treated with asphalt or bitumen coatings or roofing's felts and any blisters, peel-off traces, loose laying, etc. must be cut away and be properly filled. Masonry joints must be flush jointed. In case of tiling the roof, terrace, balcony or sun

shade, the joints between the tiles should be properly filled to avoid water penetration through the joints. Mix well the container. Apply primer coat of **HUBTEC –WATERPROOF** i.e., 25% - 30% diluted with water by brush, spray or roller. After the primer coat is completely dried, apply minimum two coats of undiluted HUBTEC -WATERPROOF. It is very important to ensure each coat is totally cured (i.e. 8 hours at 30oC) before the next coat is applied. For better result use HUBTEC -WATERPROOF GLASS FIBRE REINFORCING AGENT embedded into first coat of HUBTEC -WATERPROOF while still wet mainly expansion areas joints with parapet. All brushes and tools should be cleaned by water immediately after use. HUBTEC -WATERPROOF can be diluted with water (5-10%) for easy application.

COVERAGE:

Coverage depends upon the nature of the surface to be applied. But on average, smooth surface will give First Coat - 350 gm/sq.mt. & 300 gm/sq.mt. (Second coat) Two coats will give 1mm dry film thickness.

SAFETY:

Non-hazardous. If ingested, seek medical advice.

STORAGE:

Minimum 18 months in unopened container. Store away from sunlight and preferably below 30oC.

PACKING:

HUBTEC -WATERPROOF is available in 20 kg. Pail, 200 kg. Plastic drum.

NOTE:

All information is given in good faith on the results gained from experience and tests. However, all recommendations or suggestions are made without guarantee since we don't have any control on site conditions and its uses.

TECHNICAL DATA:

APPEARANCE	:	White Thixotropic	
SOLID CONTENT	:	65% Heated ± 2 %	
SPECIFIC GRAVITY	:	1.27 ± 0.1	
THICKNESS COAT	:	Approximately 1.0 mm, Wet Film.	
RE-COAT INTERNAL	:	4 Hours minimum.	
SURFACE DRY TIME	:	None, after 4 Hours 16 Mils wet Film.	
CURING TIME	:	48 Hours.	
TENSILE STRENGTH	:	440 psi, ASTM D-412.	
HARDNESS SHORE A	:	60, ASTM D-2240	
PERMEANCE	:	2.8 PERMS @ 20 Mils Dry	
PERMEABILITY	:	0.05 PERMS inches.	
TEMPERATURE LIMITS 20 MILS	:	-29ºC	+93ºC
CRACKING	:	NONE	NONE
TENSILE STRENGTH	:	430 psi	430 psi
ELONGATION	:	460%	460%
METHODS OF APPLICATION	:	Brush, Roller, Spray or Squeegee	

The Towers FZ - LLC	GS	MBTC

Proposed Building (3B+G+21+Roof)
Plot No. IMPZ.K.15 at Me'Aisem First Dubai, UAE

CLIENT	CONSULTANT	CONTRACTOR
THE TOWERS FZ - LLC	GOLDEN SQUARE ENGINEERING CONSULTANTS	MODERN BUILDING CONTRACTING COMPANY

REF NO	PRE-QUALIFICATION SUBMITTAL	DATE
SC/IMPZ/PQ/0005		23-May-18

Sub contractor Name & Stamp	Contract Ref
HUB TEC Building Materials	

Scope of Work

Civil Material Works

Item Description:	Pre-Qualification Document	GS GOLDEN SQUARE ENGINEERING CONSULT
Supplier / Manufacturer:		
Engr. Loai Sommad Contractor's Name & Stamp	23/05/2018 Contractor's Sign & Date	23 MAY 2018 RECEIVED Consultant's Receipt Sign & Date

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Comments

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Engr. Alaa Faiq	27/5/2018	28.05.18
Name,Sign, Date & Stamp Resident Engineer	Name,Sign & Date Discipline Engineer	Name,Sign, Date & Stamp Contractor Receiving

ADDMIX

HUBTEC Building Materials
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Web: www.hubtecdubai.com
Email: info@hubtecdubai.com

HUB TEC ADDMIX
(Water Reducing Agent)

DESCRIPTION:

HUB TEC ADDMIX is a water reducing plasticizer for concrete based on a chloride – free lignosulphonate formulation which also acts as a powerful dispersing agent.

USES:

- Ready mixed concrete.
- Pumped concrete.
- Precast concrete.
- Conventional concreting applications.

ADVANTAGES:

- Easier placement without additional water.
- Increases compressive strength
- Chloride-free, safe for use in pre-stressed and reinforced concrete.
- Compatible with all types of cement and cements containing clinker, blast furnace slag or micro silica.
- Compatible with 'most other HUB TEC ADHESIVE admixtures.
- Suitable for use in Middle east conditions.

APPLICATION INSTRUCTIONS:

The correct quality of *HUB TEC ADDMIX* – should be measured using a recommended dispenser. It should be added to the concrete with the mixing water to obtain the best results.

DOSAGE:

The normal dosage range is 0.3 – 0.7 L per 100 Kg of cement, including any cement replacement material. The optimum dosage of *HUB TEC ADDMIX* – to meet specific requirements should be determined by trials using the materials and conditions as encountered on site. Increased doses will be required at high ambient temperatures.

OVERDOSING:

Exceeding the recommended dose of *HUB TEC ADDMIX*-will results in an increase in retardation and workability, but provided that adequate curing is maintained, the ultimate strength of the concrete will not be impaired. The effects of overdosing will be increased if cement replacement materials or Type V cement is used. Over dosage may also increase air entrainment, which tends to reduce strength.

CURING:

Normal curing methods to protect concrete surfaces should be adopted.

CLEANING:

Spillages of *HUB TEC ADDMIX* should be hosed down with large qualities of water or absorbed on to fine sand and disposed of in accordance with local legislation.

HEALTH & SAFETY:

HUB TEC ADDMIX –is non-hazardous. It should not be swallowed or allowed to come into contact with skin or eyes. Suitable protective goggles and gloves should be worn. In the and dry place. In case of contact with eyes, rinse immediately. With plenty of water and seek medical advice. When contact with the skin is made, wash off immediately with soap and water. If swallowed, seek medical attention immediately, do not induce vomiting.

PACKING:

HUB TEC ADDMIX – is available in 20 L & 200 L drum.

STORAGE:

12 months storage life when store in original containers at between 2°C and 35°C in shade place.

NOTE: *All information is given in good faith on the results gained from experience and tests. However, all recommendations or suggestions are made without guarantee since we don't have any control on site conditions and its uses.*

The Towers FZ - LLC	GS	

Proposed Building (3B+G+21+Roof)
Plot No. IMPZ.K.15 at Me'Aisem First Dubai, UAE

CLIENT	CONSULTANT	CONTRACTOR
THE TOWERS FZ - LLC	GOLDEN SQUARE ENGINEERING CONSULTANTS	MODERN BUILDING CONTRACTING COMPANY

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SC/IMPZ/PQ/0005		23-May-18

Sub contractor Name & Stamp	Contract Ref
HUB TEC Building Materials	

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GOLDEN SQUARE ENGINEERING CONSULTANTS
Plot No. IMPZ.K.15
Al Me'Aisem First, Dubai, UAE

For Consultant's use

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Engr. Alaa Faiq Name,Sign, Date & Stamp Resident Engineer	27/5/2018 Name,Sign & Date Discipline Engineer	28.05.18 Name,Sign, Date & Stamp Contractor Receiving

ABOUT US

BITUMEN

HUBTEC Building Materials
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Web: www.hubtecdubai.com
Email: info@hubtecdubai.com

HUBTEC BITUMEN
(Water Based Curing, Sealing Compound)

DESCRIPTION:

HUBTECBITUMEN is a special liquid formulation, white curing and sealing compound based on acrylic resin emulsion, wetting agent and additive. It is used to prevent rapid evaporation of water from fresh concrete ensuring uniform hydration, adequate strength development and also minimize plastic shrinkage cracks. It is also used to seal concrete against ingress of water borne salts such as chlorides, sulphates and atmospheric carbon dioxide gas. It has excellent curing and sealing properties. HUBTECBITUMEN is very cost effective and labour saving, eliminate and wet abrasion.

APPLICATION OF*HUBTECBITUMEN* is ready to spray because of low viscosity.

STANDARDS:

ASTM C – 309
DAMF offer two types of HUBTECBITUMEN

STANDARD
Type1 Class A: White liquid wet, transparent film dry,65%minimum curing efficiency.

WHITE PIGMENTED
Type2 Class : White liquid wet, reflective white film dry, 75% curing efficiency.

DIRECTION OF USE:

Before using, stir *HUBTECBITUMEN* in the can. Transfer contents to a conventional back pack
Spray machine and apply top fresh concrete evenly and uniformly. Maintain uniform spraying pressure to avoid puddles. Apply *HUBTECBITUMEN* at the earliest opportunity immediately when initial bleed water has disappeared.

On formed concrete, wash the surface of the concrete with clean water immediately after removing the forms. Immediately after surface water has disappeared, apply *HUBTECBITUMEN* by spray, roller or brush.

HEALTH & SAFETY:

HUB TEC ADDMIX –is non-hazardous. It should not be swallowed or allowed to come into contact with skin or eyes. Suitable protective goggles and gloves should be worn. In the and dry place. In case of contact with eyes, rinse immediately. With plenty of water and seek medical advice. When contact with the skin is made, wash off immediately with soap and water. If swallowed, seek medical attention immediately, do not induce vomiting.

PACKING:

HUB TEC ADDMIX – is available in 20 L & 200 L drum.

STORAGE:

12 months storage life when store in original containers at between 2°C and 35°C in shade place.

NOTE: *All information is given in good faith on the results gained from experience and tests. However, all recommendations or suggestions are made without guarantee since we don't have any control on site conditions and its uses.*

The Towers FZ - LLC	GS	MBCC

Proposed Building (3B+G+21+Roof)
Plot No. IMPZ.K.15 at Me'Aisem First Dubai, UAE

CLIENT	CONSULTANT	CONTRACTOR
THE TOWERS FZ - LLC	GOLDEN SQUARE ENGINEERING CONSULTANTS	MODERN BUILDING CONTRACTING COMPANY

REF NO	PRE-QUALIFICATION SUBMITTAL	DATE
SC/IMPZ/PQ/0005		23-May-18

Sub contractor Name & Stamp	Contract Ref
HUB TEC Building Materials	

Scope of Work

Civil Material Works

Item Description:	Pre-Qualification Document	
Supplier / Manufacturer:		
Engr. Loai Sommad Contractor's Name & Stamp	23/05/2018 Contractor's Sign & Date	23 MAY 2018 RECEIVED Consultant's Receipt, Sign & Date

GS GOLDEN SQUARE ENGINEERING CONSULTANTS
Me'Aisem First, Dubai, UAE

For Consultant's use

The above submittal is: o Approved ✓ Approved as Noted o Resubmit o Rejected

Comments

1. Delivered material should be complied with DM requirement.
2. Test certificates are to be provided for all type of materials
3. Materials are to be used should be complied with the project requirement and specifications.

Engr. Alaa Faiq Name,Sign, Date & Stamp Resident Engineer	27/5/2018 Name,Sign & Date Discipline Engineer	28.05.18 Name,Sign, Date & Stamp Contractor Receiving

ABOUT US

PLASTER

TECHNICAL DATA

CEMENT PLASTER FOR INTERIOR AND EXTERIOR PLASTERING OF WALLS.

DESCRIPTION

PLASTER is a high quality, cement/limestone based, rendering and plastering mortar for masonry that meets the requirements of BS EN 998-1. Manufactured to strictly controlled specifications, it is supplied as a ready mixed powder that requires only the addition of water on site.

Can be used on any conventional masonry such as brick, stone, blockwork and concrete from 10 to 40mm thickness. NOT suitable for application onto plasterboards. PLASTER is a finely graded mortar and so offers a 'one coat' solution providing undercoat and professional finish.

PLASTER is environmentally friendly and does not contain harmful or flammable ingredients.

USES

- External, internal walls, facades, plinths
- Showers, wet-rooms, swimming pools
- Cellars and basements, bathrooms
- Old, listed and heritage buildings

BENEFITS

- Continuous laboratory testing for composition and quality
- Vapour-permeable, allowing trapped moisture to evaporate
- Easy to use- no special tools, skills or training required
- More cost-effective than any other multi-layered solutions
- Applicable as above-grade or sub-grade insulation
- No bituminous or toxic ingredients

TECHNICAL DATA

CEMENT PLASTER FOR INTERIOR AND EXTERIOR PLASTERING OF WALLS.

SURFACE PREPARATION

Before applying plaster mechanically prepare the substrate to provide a structurally sound surface. Remove all existing render, plaster, grease, oil, dirt and deleterious material. All water inrushes must be cured and stopped before applying Plaster. Clean the surface with clean water. To maximize cohesion a thin mixture of cement and water slurry or other standard primer must be applied on to the surface before plastering.

Fair faced concrete surface must be treated with Plaster Keycote (refer Keycote technical data) to obtain a mechanical key for subsequent plaster coats.

MIXING

Add about 9.5 liters of clean water to each bag (50kg) of plaster. Mixing is recommended by hand or concrete mixer. Working time of approximately 30 minutes.

APPLICATION

Plaster can be applied by trowel or mortar gun. Applicable in one single layer of 10mm to 15 mm thick or in 2-3 layers 15mm thick per layer. Final layer can be finished with standard plastering tools, while the product is still workable.

CURING

Must be protected from drying too quickly.
Ensure proper water curing for first 3 days by spraying water at least 2 to 3 times per day.
Full Curing : 28 days in ambient conditions.

PACK SIZES

50 kg bags

TECHNICAL DATA

CEMENT PLASTER FOR INTERIOR AND EXTERIOR PLASTERING OF WALLS.

COVERAGE

One 50 kg bag will cover up to 2 m² at 15 mm thick layer.

TECHNICAL DATA

Compressive strength	3,4 N/mm²

COMPOSITION

Plaster is a blend of Portland cement, graded sands, Fillers and Proprietary high end additives .

COLOUR

Grey .

SHELF LIFE AND STORAGE

Store as for Portland cement. Shelf life in sealed bags is upto 12 months when stored in dry conditions.

HEALTH & SAFETY PRECAUTIONS

This product contains Portland Cement which is slightly alkaline when wet . For people with sensitive skins continuous use may cause irritation . Gloves or suitable barrier cream should be used . As a general Code of Safety Practice all chemical products should be treated with care , kept away from children and animals , especially protect eyes and skin . In an emergency seek medical advice.

The Towers FZ - LLC	GS	MRT

Proposed Building (3B+G+21+Roof)
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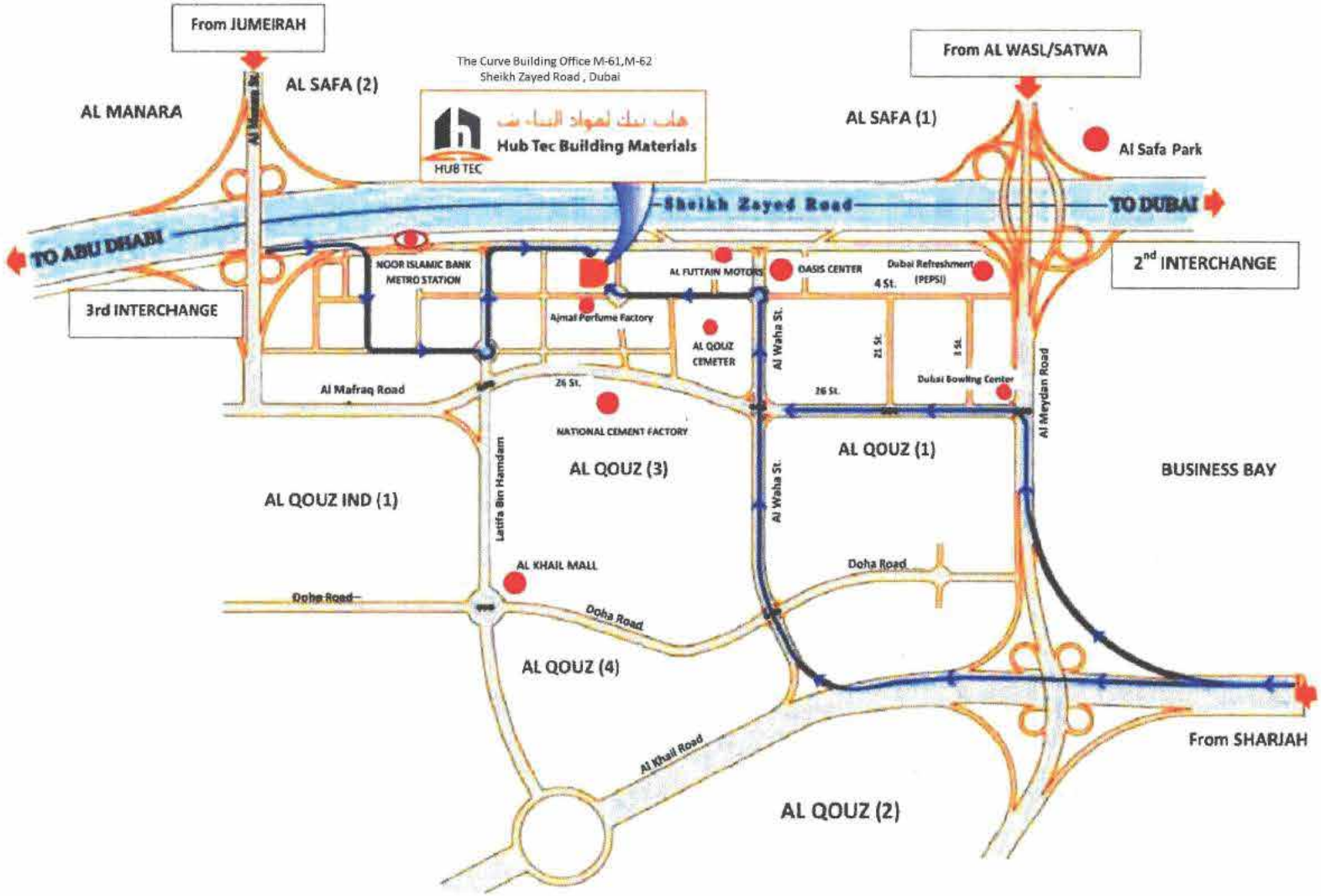
From JUMEIRAH
AL SAFA (2)
AL MANARA
The Curve Building Office M-61,M-62
Sheikh Zayed Road , Dubai
هاب تيك لمواد البناء ش.م
Hub Tec Building Materials
HUB TEC
From AL WASL/SATWA
AL SAFA (1)
Al Safa Park
Sheikh Zayed Road
TO ABU DHABI
TO DUBAI
2nd INTERCHANGE
3rd INTERCHANGE
NOOR ISLAMIC BANK METRO STATION
AL FUTTAIM MOTORS
OASIS CENTER
Dubai Refreshment (PEPSI)
4 St.
Ajmal Perfume Factory
AL QOUZ CEMETER
Al Waha St.
21 St.
15 St.
Dubai Bowling Center
Al Meydan Road
Al Mafraq Road
26 St.
NATIONAL CEMENT FACTORY
AL QOUZ (3)
AL QOUZ (1)
BUSINESS BAY
AL QOUZ IND (1)
Latifa Bin Hamdam
AL KHAIL MALL
Doha Road
Doha Road
Doha Road
AL QOUZ (4)
From SHARJAH
Al Khail Road
AL QOUZ (2)