

THE AMERICAN UNIVERSITY IN DUBAI

CIVIL ENGINEERING DEPARTMENT

Use of Concrete, Cement, and Supplementary Cementing
Materials in the UAE from 2005 to 2007

A Report Submitted by
Elias I. Saqan, Ph.D.

AMERICAN UNIVERSITY IN DUBAI

P.O. Box 28282
DUBAI, UNITED ARAB EMIRATES

to

ECOSMART FOUNDATION

SUITE 501, 402 WEST PENDER ST.
VANCOUVER, B.C. V6E 1T6
CANADA



MARCH 2008

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1. Introduction

The aim of this study is to collect data on concrete production and the use of cement, and supplementary cementing materials (SCMs) in the United Arab Emirates for the years 2005-2007. Supplementary Cementing Materials are typically waste materials from industrial processes, when mixed with Portland cement contribute to the properties of the hardened concrete through hydraulic or pozzolanic activity or both. Typical examples are fly ash, ground granulated blast furnace slag (GGBFS) and silica fumes.

This study was conducted at the American University in Dubai for EcoSmartTM Corporation. EcoSmartTM is a Federal non-profit Canadian corporation promoting the use of high volumes of SCMs in concrete to replace Ordinary Portland Cement, in an effort to ensure that concrete structures in the United Arab Emirates are sustainable from durability and resource use perspective.

2. Objectives

The main objective of this study is to compile as much data as possible on cement, concrete, and SCMs that will lead to an accurate estimate of the total concrete produced and the total cement and SCMs used in the United Arab Emirates for the past three years, 2005-2007. In doing so, specific data on concrete, cement, and SCMs was sought. The final outcome of the report is to provide information about each of the following six items:

1. Total amount of concrete produced.
2. Total amount of cement used.
3. Range of 28-day strength requirements.
4. Proportion of concrete used with durability requirements.
5. Total amount of SCMs incorporated in this concrete.
6. Range of cost of concrete, cement, and SCMs.

3. Methods of Data Collection

Different methods and approaches were explored to gather as much data as possible. Two undergraduate students from the department of civil engineering were hired to help in the data collection phase. The following is a list of the approaches used in collecting the data:

1. Gathering data on concrete batching plants, cement producers and importers (such as company name, contact person, telephone, fax, e-mail address). This was done through contacting or browsing the websites of official agencies that might have such data such as Dubai Municipality and Dubai Chamber of Commerce among others.

2. Sending letters (see Appendix) via e-mail or fax to contact persons of concrete batching plants found from the above phase asking them for their company's data relevant to this study.
3. Making telephone calls to contact persons of concrete batching plants as a follow up to the e-mail letters or faxes sent in case of no response to get their company's relevant data or to make an appointment to visit the plant to get such data.
4. Making calls and visits to some government and official agencies seeking either direct or indirect data on any or all of the six items listed in Section 2 above.
5. Searching the internet for any available published data.

4. Data Collected

It is worth mentioning that collecting data from concrete batching plants was not an easy task and as a result data was scarce. If accurate data on all six items for all the three previous years is to be collected, a considerable effort and cooperation by the concrete industry is needed. Unfortunately, most of our e-mail messages and phone calls received no replies, or at best, the reply was that such data cannot be furnished, without giving any reason. In some cases, data was given to us either verbally or in an unofficial letter. The following sections present data that was gathered on the six items listed in Section 2 above.

4.1 Concrete Production

According to information given by Dubai Municipality and presented in Appendix A, there are around sixty concrete companies operating in the United Arab Emirates. Acquiring data on concrete production for all companies was not possible. Different approaches were used to estimate the concrete production in the UAE in the past three years.

Approach A: In this approach data from the major concrete companies in the UAE market was sought in an effort to estimate the total concrete produced based on the production of these companies.

The companies listed in Table 1 are considered by experts in the field to be the majority of the largest concrete suppliers in the UAE, with a market share of around 75% of the total concrete market. Concrete production for the year 2007 is available for only 9 out of the seventeen companies listed in Table 1. The total amount of concrete produced by these nine concrete companies is 15.6 Million m³. It is shown in Table 1 that concrete produced by these companies varies considerably. So it is obvious that the market share of these seventeen

companies (assumed 75%) is not equally divided. Therefore, it is assumed that the market share of these nine companies, that included the UAE's top five companies, is two-third of the seventeen companies (two-third of 75%). Based on this assumption, it is estimated that the total amount of concrete produced in the UAE for the year 2007 is approximately 31.2 Million m³.

Table 1. Names of major concrete companies in the UAE and their 2007 concrete production

	Name	Concrete Produced / Year 2007 (Million m ³)
1.	Universal Concrete Products (UNIMIX)	2.4
2.	RMC Top Mix (CEMEX)	2.2
3.	Unibeton	2.2
4.	Conmix	2.2
5.	Technical Ready Mix (TREMIX)	1.8
6.	XTRAMIX	1.4
7.	Arabian Mix	1.4
8.	Ready Mix Beton	1.4
9.	Ready Mix Gulf	0.6
	Total	15.6
10.	Dubai Ready Mix	*
11.	National Ready Mix	*
12.	Quality Ready Mix (Q-MIX)	*
13.	Al Falah Ready Mix	*
14.	S. S. Lootah Ready Mix	*
15.	Safe Mix	*
16.	Galadari Ready Mix	*
17.	Bu Shagar Ready Mix	*

* Data not available

Approach B: Data on concrete production for the period 2005-2007 in the Emirates of Dubai and Sharjah was furnished by Dubai Municipality Engineering Materials Laboratory. The data given is summarized in Table 2.

No data is available for the rest of the Emirates, especially Abu Dhabi which is also witnessing large residential and infrastructure projects. It is assumed (for the lack of any accurate information) that concrete produced in the rest of the Emirates (Abu Dhabi, Ajman, Um Al Qowain, Ras Al Khaima, and Al Fujaira) for the past three years is approximately one third of that produced in Dubai and Sharjah combined. With this assumption, the total amount of concrete produced in the UAE for the years 2005 – 2007 can be estimated and is shown in Table 2.

For the year 2007, the estimated amount of concrete produced in the UAE (34.6 Million m³) found from extrapolating the data given by Dubai Municipality is 10% larger than the previous number of (31.2 Million m³) found from Approach A.

Table 2. Concrete consumed in Dubai and Sharjah as given by Dubai Municipality, and the estimated consumption in UAE for the years 2005-2007

Year	Dubai (Million m ³)	Sharjah (Million m ³)	<u>Estimated</u> in the rest of the UAE (Million m ³)	<u>Estimated</u> Total (Million m ³)
2005	11.2	4.8	5.3	21.3
2006	14.7	6.3	7.0	28.0
2007	18.2	7.8	8.6	34.6

Approach C: Data from Unibeton indicated that the company's 2007 concrete production is 2.2 Million m³ and their estimate of the market share is 7%. From this data, one can calculate the total concrete production for the year 2007 to be 31.4 Million m³. This number not only compares well with both numbers found from Approaches A and B, but also yields a market share of the nine companies shown in Table 1 of 49.6% which agrees very well with the 50% (two-third of 75%) estimate that was assumed.

In the next section, the total amount of concrete produced in the UAE will be estimated from the amount of cement consumed (Approach D), and then a conclusion will be drawn.

4.2 Cement

Cement production in the UAE is an old market and as a result most of the cement used is produced in the UAE. Some cement, that can be estimated to be 15-20% of the total cement used, is also imported from India, Pakistan, China, Egypt, and Iran to compensate for the sharp increase in demand for cement. This increase is mainly due to the start of major projects in most of the UAE. However, there are problems with cement imports especially in supply interruption and price fluctuation.

According to the United Arab Emirates Year Book 2007, 70% of the cement production market is divided amongst the six largest companies. In 2005, Gulf Cement Company was the market leader with 17% of the total cement capacity of the UAE followed by Sharjah Cement and Industrial Development Company with 15% share. Fujairah Cement and National Cement followed next by 12% and 10% share, respectively. According to the same source, per capita cement consumption in the UAE during the years 2005 and 2007 was 2900 kg and 3500 kg, respectively. During the years 2005 and 2007, the population of the

UAE, according to the UAE Census 2005 and Dubai Statistics Center, is 3.7 Million and 4.2 Million, respectively. These numbers yield the total consumption of cement in the UAE for the years 2005 and 2007, which is approximately 10.7 and 14.7 Million tons, respectively.

Going back to concrete production (**Approach D**), it is a general practice to assume that on average one cubic meter of concrete consumes 350 kg of cement. It is also considered that about 85% of the cement is used in the concrete production while the rest is used in other applications. Therefore, to approximate the total amount of concrete produced in the UAE for the year 2005 and 2007, 10.7 and 14.7 Million tons of cement would produce 26.0 and 35.7 Million m³ of concrete, respectively. Based on this, one can estimate the amount of cement consumed in year 2006 by using the amount of concrete produced and found from Approach B. The estimated total amounts of cement used in the UAE for the years 2005-2007 are shown in Table 3. These estimated amounts are compared with estimates done by the International Cement Review magazine and also shown in Table 3. The estimates found in this report are always on the lower side from 4-14% at most.

Table 3. Estimated cement consumed in the UAE for the years 2005-2007

Year	Estimated Cement Consumed (Million tons)	Estimated Cement Consumed (International Cement Review) (Million tons)
2005	10.7	11.6
2006	11.6	13.3
2007	14.7	15.3

Based on all of the above, the total cement consumed and the total concrete produced in the UAE for the years 2005 – 2007 are shown in Figures 1 and 2, respectively. As a best estimate, the total concrete produced is taken as an average of all approaches discussed.

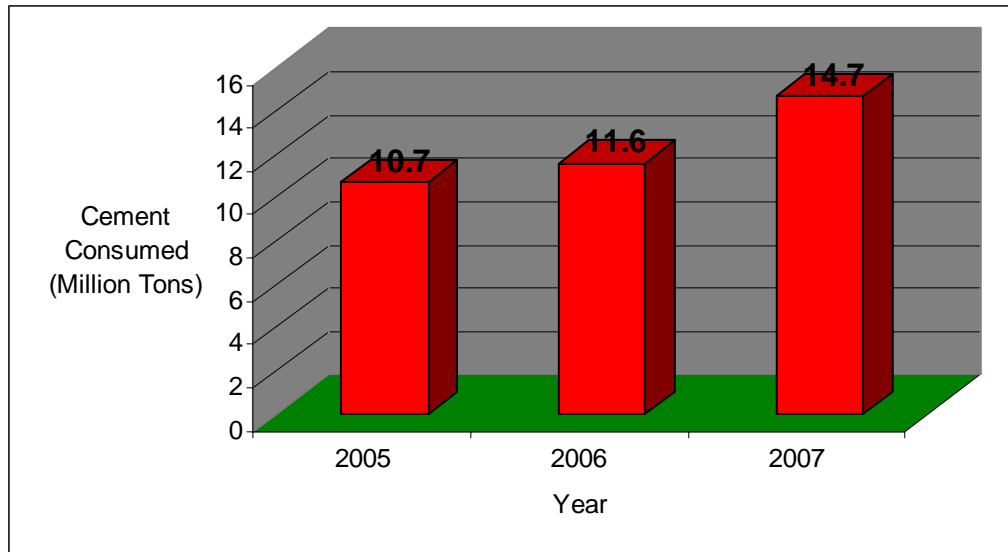


Figure 1. Estimated total amounts of cement consumed in the UAE in 2005-2007

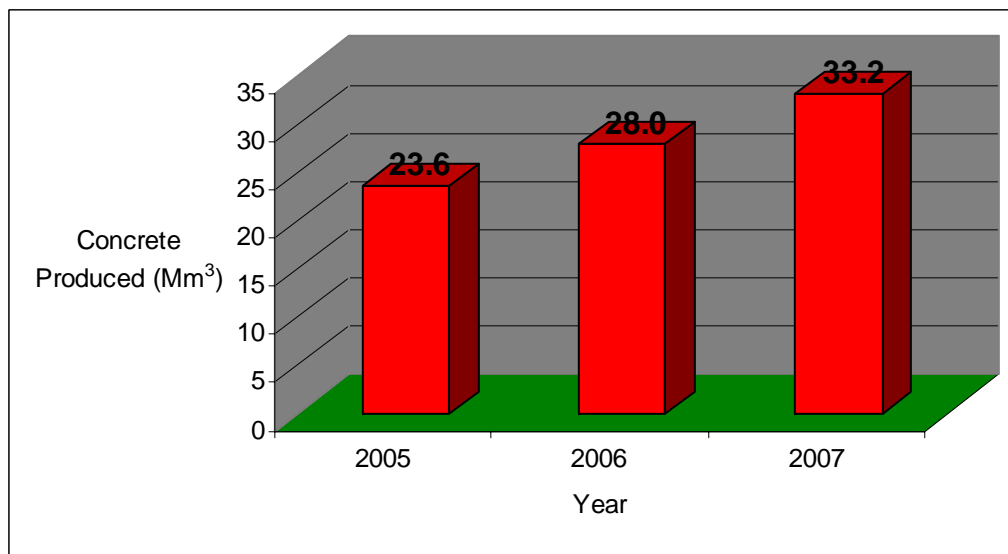


Figure 2. Estimated total amounts of concrete produced in the UAE in 2005-2007

4.3 Range of 28-Day Strength

Some concrete companies furnished some data on the range of 28-day strength their batching plants typically produce. A sample of these companies is tabulated in Table 4. The names of the companies are not specified as per company request, however, the listed companies are considered the major concrete companies in the UAE.

Table 4. Range of 28-day strength concrete produced by major concrete companies

Name	40 MPa %	50 MPa %	60 MPa %	70 MPa %	Other %
Company 1	10	50	10	10	20
Company 2	20	50	20		10
Company 3	15	50	10	10	15
Company 4	60	10	10		20
Company 5	25		50	20	5

Data listed in Table 4 show that concrete with 28-day strength of 40 MPa make up approximately 25% of the total concrete produced, 50 MPa make up approximately 35% of the total concrete produced, 60 MPa make up approximately 20% of the total concrete produced, while the rest 20% of the concrete produced is either below 40 MPa or above 60 MPa. For all practical matters, concrete in the range of 40-60 MPa make up the majority (80%) of the concrete produced in the UAE.

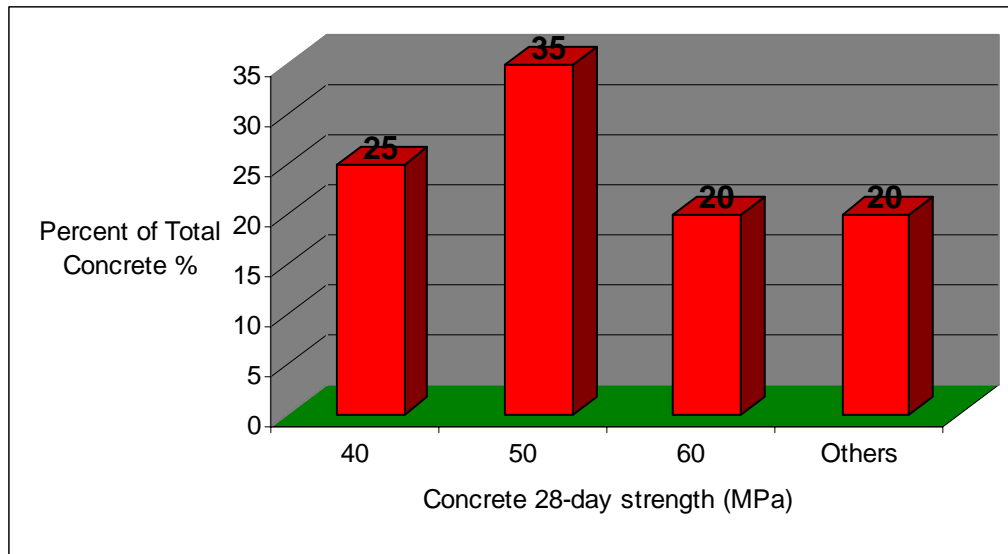


Figure 3. Range of 28-day strength concrete currently produced in the UAE

4.4 Proportion of Concrete Used with Durability Requirements

The same companies shown in Table 4 also provided the percentages of concrete they supply with some durability requirements by the designers or consultants. The list of companies and the percentage of concrete supplied with durability requirements are shown in Table 5.

Table 5. Percentage of concrete produced with durability requirements

Name	Concrete with Durability Requirements (%)
Company 1	60
Company 2	60
Company 3	60
Company 4	50
Company 5	70

It is clear from Table 5 that a substantial amount (more than 50%) of the concrete produced by the major concrete companies in the UAE have durability requirements specified by the designers or consultants.

4.5 Total Amount of SCMs Incorporated in the Concrete Produced in UAE

In the letter sent to the concrete companies (see Appendix), the amounts of SCMs used in the concrete they supply were also required, specifically, data on fly ash, GGBFS, and Micro Silica was requested. The data that was received is summarized in Table 6 as a ratio of a particular SCM in tons to the amount of cement the company used in tons.

Table 6. Percentage of SCMs used in concrete

Name	Fly Ash / Cement	GGBFS / Cement	Micro Silica / Cement
Company 1	-	0.40	0.028
Company 2	-	0.38	0.028
Company 3	-	0.34	0.028
Company 4	-	0.25	0.20
Company 5	0.15	0.45	0.03

The average SCM / Cement ratio in these 5 companies is 0.364 for GGBFS and 0.062 for Micro Silica. It is believed that data at hand is not enough to come up with a conclusion for the total amounts of SCMs used in the UAE. However, data provided by Dubai Municipality on GGBFS used in Dubai only for the year 2007 is around 2 Million tons. Currently, four companies in the UAE grind granulated blast furnace slag to produce GGBFS. These companies and their current annual production are shown in Table 7. The total GGBFS produced is 2.1 Million ton. Therefore, the Dubai Municipality estimate of 2 Million tons in Dubai only is believed to be on the high side. Knowing that some ready mix concrete companies import their GGBFS directly, it is believed that the total

amount of GGBFS consumed in the whole UAE for the year 2007 is approximately 2.5 Million tons.

No significant data was collected from the concrete companies on their use of fly ash. Until now GGBFS is the choice of SCM for concrete companies because of its availability from the local cement companies and its ease of handling. However, some data was provided by one of the major fly ash suppliers in the UAE. This data indicated that lately the use of fly ash has been on the rise. This company's sale of fly ash rose from 0.085 Million ton/year in 2005 to 0.12 Million ton/year in 2006 to 0.2 Million ton/year in 2007.

Table 7. Companies producing GGBFS in the UAE and their 2007 production

Company	GGBFS Production (M ton / year)
Gulf Cement, Ras Al Khaimah	0.60
Sharjah Cement, Sharjah	0.60
National Cement, Dubai	0.45
Binani Cement, Jebel Ali	0.45
Total	2.1

4.6 Cost of Concrete, Cement, and SCMs

Some of the companies responded to our request of concrete prices. A summary of the data obtained is summarized in Table 7. These prices are for the year 2007. The range of concrete price for the period 2005 – 2007 is shown in Figure 4.

Table 8. Current cost of concrete / m³

Name	30 MPa AED/m ³	40 MPa AED/m ³	50 MPa AED/m ³	60 MPa AED/m ³	70 MPa AED/m ³
Company 1	-	-	-	-	-
Company 2	200	215	240	280	300
Company 3	-	-	-	-	-
Company 4	230	240	250 [#]		
Company 5	*	*	*	*	*

* average of 270 AED

280 AED with durability requirements

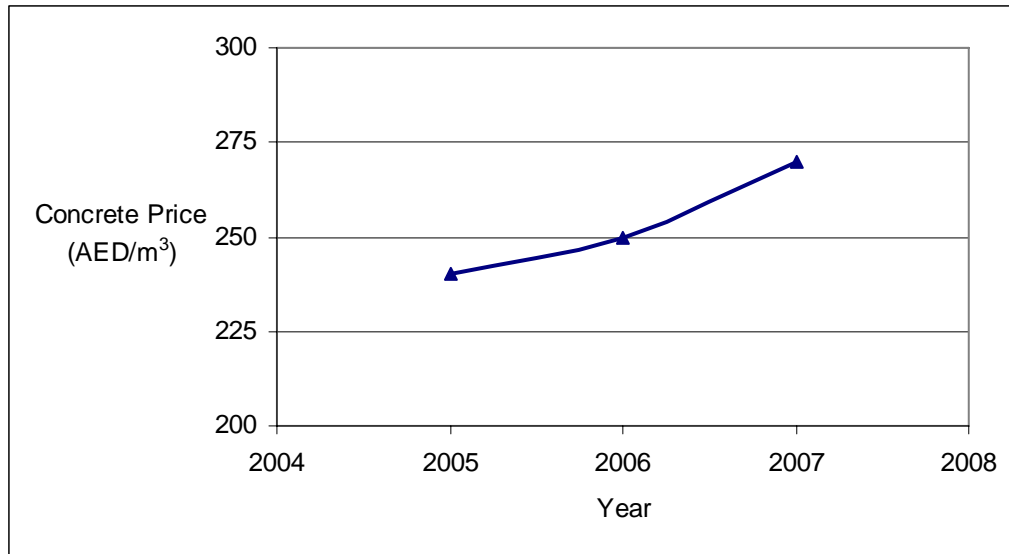


Figure 4. Average concrete price in UAE for the period 2005-2007

The price of cement varies depending on the supply and demand of the market. The average prices of cement / ton, GGBFS / ton, and fly ash / ton during the period 2005 – 2007 are shown in Figure 5. The price of fly ash in particular varies depending on the distance from the source.

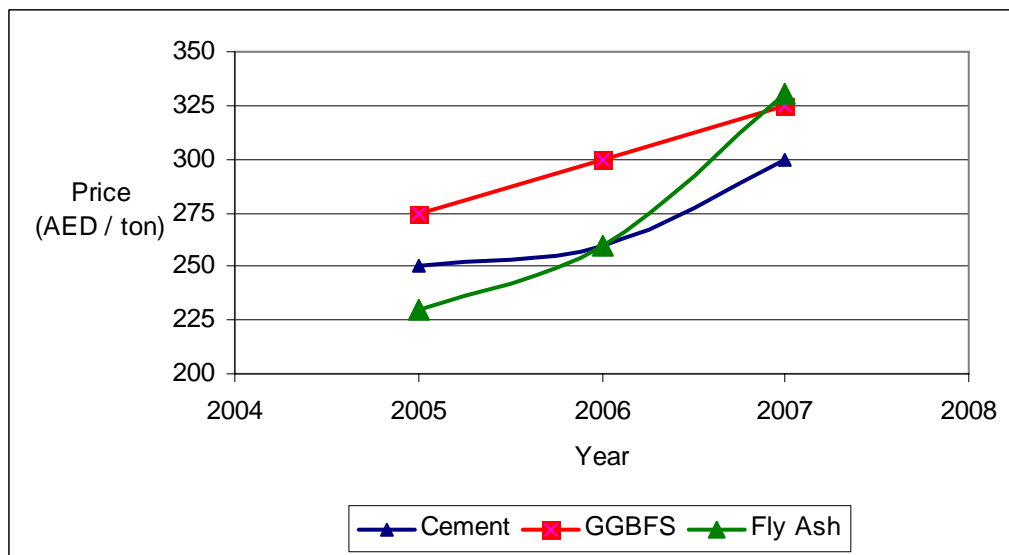


Figure 5. Average cement, GGBFS, and fly ash prices in UAE for the period 2005-2007

5. Concluding Remarks

The aim of this study was to collect data on the consumption of cement and production of concrete in the UAE for the past three years. Other data was also sought such as the average price of cement and concrete, the amounts of SCMs used and their corresponding prices.

Data collection was difficult due to the lack of cooperation from the concrete industry at large. Due to this difficulty, different approaches were used to estimate the quantities needed. The different approaches always yielded numbers that compare reasonably well with each others and with other available published data. Therefore, it is believed that the estimates provided in this report are accurate to within $\pm 10\%$. The help and involvement of the ready mix concrete companies are vital if more accurate numbers are to be derived.

References

1. Dubai Municipality Central Laboratory.
2. Direct information from concrete companies.
3. Direct information from cement companies.
4. Direct information from concrete and materials testing laboratories.
5. Arab Union for Cement and Building Materials.
6. International Cement Review magazine.
7. Web sites of concrete companies.
8. United Arab Emirates Year Book.
9. Dubai Statistics Center.
10. Ministry of Public Works, United Arab Emirates.
11. Construction Week Journal.

Appendix



Department of Civil Engineering

Engineering Building - E 302

Tel: 971 (4) 318-3403 - Fax: 971 (4) 399-8899

P. O. Box 28282

Dubai - United Arab Emirates

September 27, 2007

Dear Sir,

Alhasan Mohammad and Ismail Chlyeh are students in the Department of Civil Engineering at the American University in Dubai. They are working under my supervision on a project with EcoSmart Foundation, Canada. EcoSmart Foundation is promoting the use of EcoSmart Concrete in the UAE in general, and in Dubai in particular. EcoSmart Concrete is a carefully engineered material that contains high levels (up to 50%) of supplementary cementing materials (SCMs) such as fly ash, ground granulated blast furnace slag (GGBFS), micro-silica, and pozzolanic volcanic ash, and appropriate additives. It has very high durability and long-term strength compared to conventional concrete.

In order to promote EcoSmart Concrete, it is required that we have an excellent understanding of the availability and current use of concrete, cement, and SCMs in the UAE. On behalf of the University, I would sincerely appreciate it if you could provide the students with data on the following, for the years 2005, 2006, and 2007 (projected):

1. total concrete produced in your plant in cubic meters
2. total cement consumed in making this concrete in metric tons
3. range of 28-day strength requirements (estimates by quantity) in MPa
4. proportion of concrete produced with durability requirements
5. total amount of supplementary cementing materials incorporated in this concrete in metric tons, broken out by type: fly ash, GGBFS, and micro-silica.
6. if possible, the cost of concrete (per cubic meter), cement, and SCMs (per metric ton).

Should you have any questions regarding this matter, please do not hesitate to contact me at (04) 318-3403.

Sincerely,

Dr. Elias I. Saqan

Assistant Professor of Civil Engineering



DUBAI MUNICIPALITY
DUBAI CENTRAL LABORATORY DEPARTMENT
Tel (04) 3027555 Fax (04) 3351127 e-mail: certification@dm.gov.ae

REGISTERED READYMIX CONCRETE PLANTS AND CENTRAL BATCHING UNITS AS PER ADMINISTRATIVE ORDER 143/1991

PROJECT NUMBER	READYMIX PLANT/CENTRAL BATCHING UNIT NAME	TELEPHONE	FAX	ADDRESS	E.Mail Address
RMX-01	NATIONAL READYMIX CONCRETE COMPANY	2858-168	2862-104	P.O. BOX 10631, DUBAI	islotaah@emirates.net.ae
RMX-03	READYMIX BETON	3472-837	3473-884	P.O. BOX 51804, DUBAI	rmb.dubai@readymixbeton.com
RMX-05	TECHNICAL READYMIX CONCRETE EST.(TREMIX)	2673-333	2673-009	P.O. BOX 19877, DUBAI	tremixd@emirates.net.ae
RMX-06	ARABIAN MIX	3382-886	3381-243	P.O. BOX 158, DUBAI	amixncp@emirates.net.ae
RMX-07	R M C TOPMIX (L.L.C.) ALQUOZ INDUSTRIAL AREA	3470-427	3470-740	P.O. BOX 88, DUBAI	topmix@emirates.net.ae
RMX-08	UNIVERSAL CONCRETE PRODUCTS LIMITED (UNIMIX)	3387-816	3387-735	P.O. BOX 11091, DUBAI	unimix@emirates.net.ae
(SH)RMX-10	CONMIX LTD. - SHARJAH	(06)5314-155	(06)5314-332	P.O. BOX 5936, SHARJAH	conplast@conmix.com
RMX-11	S S. LOOTAH COMPANY - RDMX CONCRETE DIVISION - ALQUSAIS	2672-233	2673-594	P.O. BOX 553, DUBAI	sslrdrmx@emirates.net.ae
RMX-25	UNITED PRECAST CONCRETE PLANT	3474-440	3474-746	P.O. BOX 52900, DUBAI	upchos@emirates.net.ae
RMX-29	AL AZZANI READYMIX	3473-777	3473-061	P.O. BOX 52846, DUBAI	azzani@emirates.net.ae
RMX-30	READYMIX GULF LTD - DUBAI BRANCH	3474-123	3474-552	P.O. BOX 289, DUBAI	rmgdubai@emirates.net.ae
RMX-34	ALNABOODAH C.C.(CBU) AT NORH EAST OF DUBAI INT.AIRPORT	2543273	2641959	P.O. BOX 4588, DUBAI	kumarbn@alnaboodah-civi.com
RMX-36	S.S. LOOTAH READY MIX CONCRETE ALQOZ IND. AREA	3470-080	2673-594	P.O. BOX 553 -, DUBAI	sslrdrmx@emirates.net.ae
(SH)RMX-37	ALJAZAIRI READYMIX CONCRETE(JAMIX)SHARJAH	06-5346677	06-5346700	P.O. BOX 40387, SHARJAH	jamix@emirates.net.ae
RMX-38	MODERN CONCRETE PRODUCTS FACTORY	3400-200	3475-335	P.O. BOX 37709 -, DUBAI	modcon@emirates.net.ae
RMX-45	CONMIX LIMITED - (DUBAI BRANCH)	3472-225	3472-180	P.O. BOX 71285, DUBAI	conmix@conmix.com
RMX-46	KHANSABEH CIVIL ENGINEERING CBU AT B-239 JABEL ALI IND AREA	8801314	8801193	P.O. BOX 2716 DUBAI	kceroads@emirates.net.ae
RMX-50	ENGINEERING CONTRACTING CO. C.B.U. @ P-105 J.A. IND. AREA #4	3476123	3476124	P.O. BOX 62393, DUBAI	ecchnds@emirates.net.ae
(SH)RMX-52	READYMIX GULF LTD - SHARJAH	(06) 5432 614	(06) 5433 791	P.O. BOX 52492, SHARJAH	gulfrmc@emirates.net.ae
RMX-53	JUMA AL MAJID PRECAST DIVISION	3477-555	3477-888	P.O. BOX 3762, DUBAI	iamcpp01@emirates.net.ae
RMX-54	RMC TOPMIX - JABEL ALI PLANT	881-8178	393-1212	P.O. BOX 6614, DUBAI	topmix@emirates.net.ae
RMX-55	CONCRETE TECHNOLOGY (L.L.C.)	8801777	8801666	P.O. BOX 31950, DUBAI	concretc@emirates.net.ae
RMX-56	DUBAI READY MIX CONCRETE (L.L.C.)	880-1141	880-1142	P.O. BOX 30639, DUBAI	drmc@emirates.net.ae
RMX-57	Q MIX READYMIX MANUFACTURING (L.L.C.)	3339993	3339931	P.O. BOX 76150, DUBAI	q_mixedb@emirates.net.ae
RMX-58	EMIRATES PRECAST CONST. C.B.U.AT B/236 JABEL ALI IND.AREA	8802111	8802999	P.O. BOX 10062, DUBAI	epc@emirates.net.ae
(SH)RMX-59	SAFE MIX READY CONCRETE - SHARJAH	06-5436999	06-5436677	P.O. BOX 2181, SHARJAH	safemix@emirates.net.ae
RMX-61	WADE ADAMS CONTRACTING CO (L.L.C.) AT B-244 JABEL ALI	8001000	8801543	P.O. BOX 4337, DUBAI	yesudas@wadeadams.com
RMX-64	LOOTAH CONCRET PRODUCTS - JABEL ALI	880-1887	880-1889	P.O. BOX 10631, DUBAI	islotaah@emirates.net.ae
RMX-65	GULF PRECAST CONCRETE (L.L.C.) DUBAI BRANCH	8851033	8851016	P.O. BOX 19302, DUBAI	gprecas@eim.ae
RMX-68	SAFE MIX READY MIX FACTORY (L.L.C.)	8801788	8801789	P.O. BOX 33949, DUBAI	safemix@emirates.net.ae
RMX-71	ALNABOODAH C.C.(CBU) AT DUBAI FESTIVAL CITY-NAD ALHAMAR	2543273	2641959	P.O. BOX 4588, DUBAI	kumarbn@alnaboodah-civi.com
RMX-74	UNIMIX CBU FOR JUMEIRAH BEACH RESIDENCE PROJECT	3387-816	3387-735	P.O. BOX 11091, DUBAI	unimix@emirates.net.ae
RMX-75	UNEC-CBU FOR CHINA TOWN & DS 116 SEW. & DR. PROJECTS	282-8242	282-9929	P.O. BOX 7510, DUBAI	safemix@emirates.net.ae
RMX-76	NATIONAL READYMIX CBU FOR ARABIAN RANCHES DEV. PROJECT	880-1887	880-1889	P.O. BOX 10631, DUBAI	islotaah@emirates.net.ae
RMX-77	R M C TOPMIX CBU FOR DXB INTL AIRPORT EXPANSION (PHASE 2)	3470-427	3470-740	P.O. BOX 88, DUBAI	topmix@emirates.net.ae



DUBAI MUNICIPALITY
DUBAI CENTRAL LABORATORY DEPARTMENT
Tel (04) 3027555 Fax (04) 3351127 e-mail: certification@dm.gov.ae

REGISTERED READYMIX CONCRETE PLANTS AND CENTRAL BATCHING UNITS AS PER ADMINISTRATIVE ORDER 143/1991

PROJECT NUMBER	READYMIX PLANT/CENTRAL BATCHING UNIT NAME	TELEPHONE	FAX	ADDRESS	E-Mail Address
RMX-78	S.S. LOOTAH READY MIX CONCRETE JABEL ALI IND. AREA	3470-080	2673-594	P.O. BOX 553 -, DUBAI	ssldymx@emirates.net.ae
RMX-79	UNIBETON READYMIX (L.L.C.)	8802600	3321001	P.O. BOX 4157 -, DUBAI	afgc08ub@emirates.net.ae
RMX-81	UNION PRECAST FACTORY CBU AT JABEL ALI INDUSTRIAL AREA	8802244	8802245	P.O. BOX 18184, DUBAI	upf@emirates.net.ae
RMX-82	AL FALAH CBU FOR PALM ISLAND PROJECT S.BARSHA	3478855	3478600	P.O. BOX 38226, DUBAI	alfalah@alfalahreadymix.ae
RMX-83	READY MIX BETON CBU FOR NEW EMIRATES ENGINEERING CENTER	3472-837	3473-684	P.O. BOX 51804, DUBAI	rmb.dubai@readymixbeton.com
RMX-84	TREMIX READYMIX CONCRETE FACTORY	2673333	2673009	P.O. BOX 19877, DUBAI	tremixd@emirates.net.ae
RMX-85	ARABIAN MIX CBU FOR JUMEIRAH LAKE TOWERS -PARKING GARAG	3382886	3381-243	P.O. BOX 158, DUBAI	amixncp@emirates.net.ae
RMX-86	CONMIX LIMITED - (DUBAI BRANCH)-DUBAI INVESTMENT PARK	3472-225	3472-180	P.O. BOX 71285, DUBAI	conmix@conmix.com
RMX-87	UNIBETON READYMIX (L.L.C.) CBU FOR R-757/2 PALM ISLAND ROAD	8802600	3321001	P.O. BOX 4157 -, DUBAI	afgc08ub@emirates.net.ae
RMX-88	MILLS BOWLEY CONCRETE PRODUCTS (L.L.C.)	(050) 5585071 / 8802600	(050) 5583901 / 88024	P.O. BOX 114490 -, DUBAI	enquiries@mbmix.com
RMX-89	AL FALAH READYMIX CONC. CBU FOR DUBAI PEARL PROJECT	3478855	3478600	P.O. BOX 38226, DUBAI	alfalah@alfalahreadymix.ae
RMX-90	AUSTRIAN ARABIAN READY MIX CONCRETE (L.L.C.)	8802327	8802328	P.O. BOX 114431, DUBAI	aac@ahdcdbx.ae
RMX-92	TRANSGLULF READY MIX CONCRETE CO. (L.L.C.) (DUBAI BR.)	8801445	8801446	P.O. BOX 62393, DUBAI	ecchndsa@emirates.net.ae
RMX-93	E.C.C. CBU FOR ZAYED UNIVERSITY PROJECT AT AL RUWAYYAH	3260008	3260009	P.O. BOX 5750, DUBAI	contech@emirates.net.ae
RMX-94	ALHOLLA CONCRETE TECHNOLOGY CO. CONTECH (L.L.C.)	8802662	8802622	P.O. BOX 37642, DUBAI	mail@hardprecast.com
RMX-95	HARD PRECAST BUILDINGS SYSTEMS (L.L.C.)	8801555	8801400	P.O. BOX 51804, DUBAI	rmb.dubai@readymixbeton.com
RMX-96	READYMIX BETON CBU FOR R-800/1 RAS AL KHOR CROSSING PROJ	3472-837	3473-684	P.O. BOX 11091, DUBAI	unimix@emirates.net.ae
RMX-98	UNIMIX CBU FOR BURJ DUBAI PROJECT	3387-816	3387-735	P.O. BOX 78526, DUBAI	bushager@emirates.net.ae
RMX-99	BU SHAGER READYMIX CONCRETE	8802556	8802557	P.O. BOX 88, DUBAI	topmix@emirates.net.ae
RMX-100	RMC TOPMIX - CBU FOR DUBAI MALL PROJECT	3470-427	3470-740	P.O. BOX 56027	mefg@emirates.net.ae
RMX-101	MIDDLE EAST READY MIX	8803094	8803095		
RMX-102	TRANSGLULF RMX CBU FOR EMIRATES AIRLINES BLDG PROJECT	8801445	8801446		
RMX-103	QUALITY READY MIX INDUSTRY (L.L.C.)	8802898	8802899	P.O. BOX 92063 DUBAI	tmigt@emirates.net.ae
RMX-104	MAMMUT TEGNOCRETE F.Z.E.	2216589	2249083	P.O. BOX 28414 DUBAI	info@technocrete.ae
RMX-106	NATIONAL READYMIX CONCRETE CO CBU FOR J.A. CONTAINER TER	880-1887	880-1889	P.O. BOX 10631, DUBAI	islotah@emirates.net.ae
RMX-107	GALADARI MAXI MIX (L.L.C.)	8802820	8802825	P.O. BOX 38453, DUBAI	murali@maximix.ae
RMX-108	Q.MIX RMX MANUFACTURING (LLC)-J.A.IND.AREA	3339993	333931	P.O. BOX 76150, DUBAI	q.mixxb@emirates.net.ae
RMX-109	GULF PRECAST CONCRETE (L.L.C.) DUBAI BRANCH at DXB INVEST. P	8851033	8851016	P.O. BOX 19302, DUBAI	gprecast@eim.ae
RMX-110	DXB PRECAST FACTORY (L.L.C.)	8802102	8802521	P.O. BOX 10610, DUBAI	kalkicon@eim.ae
RMX-111	ALNABOODAH C.C.(CBU) AT JEBEL ALI AIRPORT	2948777	2948833	P.O. BOX 33900, DUBAI	accivil@emirates.net.ae
RMX-112	UNIBETON READY MIX CBU AT AL JADAF	8802600	8802299	P.O. BOX 4157 -, DUBAI	mithgald@hotmail.com
RMX-113	ARABIAN MIX CBU FOR DXB METRO RAIL-ALWARSAN	3382886	3381-243	P.O. BOX 158, DUBAI	emblock@emirates.net.ae
RMX-114	READY MIX BETON CBU FOR R-800/3 AT RAS ALKHOR-DXB	3472227	3473684	P.O. BOX 51804, DUBAI	rmb.dubai@readymixbeton.com
RMX-115	AUSTRIAN ARABIAN READY MIX (CBU) AT DUBAI LAND	8802327	8802328	P.O. BOX 114431, DUBAI	aac@ahdcdbx.ae
RMX-116	READY MIX BETON CBU AT MARITIME CITY-DXB	3472227	3473684	P.O. BOX 51804, DUBAI	rmb.dubai@readymixbeton.com



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REGISTERED READYMIX CONCRETE PLANTS AND CENTRAL BATCHING UNITS AS PER ADMINISTRATIVE ORDER 143/1991

PROJECT NUMBER	READYMIX PLANT/CENTRAL BATCHING UNIT NAME	TELEPHONE	FAX	ADDRESS	E.Mail Address
RMX-117	AUSTRIAN ARABIAN READY MIX (CBU) AT AL WARQA'A	8802327	8802328	P.O. BOX 114431, DUBAI	aac@ahdcdxb.ae
RMX-118	DUBAI PRECAST (L.L.C.) AT J.A.IND. AREA	8802671	8802159	P.O. BOX 61055, DUBAI	jr@dubaiprecast.ae
RMX-119	GOLDEN READYMIX (LLC) AT J.A.I.IND AREA	2246680	2246683	P.O. BOX 27452, DUBAI	grm@goldenreadymix.com
RMX-120	LARSEN & TUBRO READYMIX CONCRETE INDUSTRIES(L.L.C)	04-8803606	04-8803605	P.O. BOX 112380, DUBAI	rgi@Intecc.com
RMX-121	EMIRATES SAS READYMIX (LLC) AT JABEL ALI IND. AREA	04-8802444	04-8802442	P.O. BOX 11737, DUBAI	emixsas@aim.ae
RMX-122	Q.MIX CBU FOR INDUSTRIAL CITY & LABOUR CITY PROJECT	3339993	3339931	P.O. BOX 76150, DUBAI	g_mixedxb@emirates.net.ae
RMX-123	Q.MIX CBU FOR THE LAGOON PROJECT	3339993	3339931	P.O. BOX 76150, DUBAI	g_mixedxb@emirates.net.ae
RMX-124	READY MIX BETON CBU FOR R-884 IMPROVEMENT OF AL ITTIHAD R	3472227	3473684	P.O. BOX 51804, DUBAI	rmb.dubai@readymixbeton.com
RMX-125	AL FALAH READYMIX CONCRETE - JEBEL ALI	3478855	3478600	P.O. BOX 38226, DUBAI	alfalah@alfalahreadymix.ae
RMX-126	AL FALAH READYMIX CONC. CBU FOR WATER FRONT PROJECT	3478855	3478600	P.O. BOX 38226, DUBAI	alfalah@alfalahreadymix.ae
RMX-127	ARABIAN MIX (CBU) FOR DUBAI METRO RAIL PROJECT	3382886	3381243	P.O. BOX 158, DUBAI	amixncp@emirates.net.ae
RMX-128	ALBAHAR INTERNATIONAL CEMENT PRODUCTS.	2950140	2950145	P.O. BOX 121758, DUBAI	albaharint@eim.ae
REMARK: CERTIFICATE NUMBER FOR FINE AGGREGATES USED IN THE CONCRETE MIX SHALL APPEAR ON EACH DELIVERY VOUCHER OF DELIVERED CONCRETE.					

CONCRETE PRODUCTION

Name of Batching Plant		<i>COMPANY 1</i>
Total Concrete Produced	m ³ /month	200,000
Total Cement Consumed	Ton.	80,000
Specified Strength	N/mm ²	50N/mm ² - 50% 60-70N/mm ² - 20% 40N/mm ² - 10% Others - 20%
Durable Concrete Produced	%	60
Supplementary Cementitious Material		
Fly Ash	Ton	-
GGBS		32,000
Micro Silica		2200
Coast of Concrete	AED/m ³	-

CONCRETE PRODUCTION

Name of Batching Plant		<i>COMPANY 2</i>
Total Concrete Produced	m ³ /month	180,000
Total Cement Consumed	Ton.	72,000
Specified Strength	N/mm ²	40N/mm ² - 50% Piling 10% 60N/mm ² - 20% 40N/mm ² - 10% 45N/mm ² - 10%
Durable Concrete Produced	%	60
Supplementary Cementitious Material		
Fly Ash	Ton	-
GGBS		28,000
Micro Silica		2,000
Coast of Concrete	AED/m ³	30N -200AED 40N -215AED 50N -240AED 60N -280AED 70N -300AED

CONCRETE PRODUCTION

Name of Batching Plant		COMPANY 3
Total Concrete Produced	m ³ /month	160,000 – 200,000
Total Cement Consumed	Ton.	72,000
Specified Strength	N/mm ²	50N/mm ² - 50% 60-70N/mm ² - 20% 40N/mm ² - 15% <40N/mm ² - 15%
Durable Concrete Produced	%	60
Supplementary Cementitious Material		
Fly Ash	Ton	-
GGBS		25,000
Micro Silica		2,000
Coast of Concrete	AED/m ³	-

CONCRETE PRODUCTION

Name of Batching Plant		COMPANY 4	
Total Concrete Produced	m³/month	>150,000	
Total Cement Consumed	Ton.	52,000	
Specified Strength	N/mm²	40N/mm² - 60% 50-60N/mm² - 20% Others - 20%	
Durable Concrete Produced	%	50 %	
Supplementary Cementitious Material			
Fly Ash	Ton	-	
GGBS		13,000	
Micro Silica		10,400	
Coast of Concrete	AED/m³	30N-230 AED	Durable Concrete
		40N-240 AED	50N -280 AED
		50N-250 AED	>50N -300 AED

CONCRETE PRODUCTION

Name of Batching Plant		<i>COMPANY 5</i>
Total Concrete Produced	m ³ /month	120,000
Total Cement Consumed	Ton.	48,000
Specified Strength	N/mm ²	60N/mm ² - 50% 40N/mm ² - 25% 70N/mm ² - 20% 80N/mm ² - 5%
Durable Concrete Produced	%	70
Supplementary Cementitious Material		
Fly Ash	Ton	7200
GGBS		21600
Micro Silica		1440
Coast of Concrete	AED/m ³	Average-270 Dhs.