

Knowledge Cum Strategy Partner



TATA STRATEGIC MANAGEMENT GROUP



4th International
Construction Chemicals
Conclave-2013

January 2013

A report on Construction Chemicals

-:Theme:-

**Chemicals & Construction:
Building a Future Together**





Message



Naina Lal Kidwai
President, FICCI &
Country Head-HSBC India &
Director- HSBC Asia Pacific

Construction Chemicals are an important component of the chemical industry and are playing an increasingly important role in nation building. Their judicious usage improves the quality as also durability of structures. The use of Construction Chemicals is still negligible in India because of low market awareness. With proper awareness about this sector the use of construction chemicals will increase and thus contribute in a small but significant way to the Indian economy.

Federation of Indian Chambers of Commerce and Industry (FICCI) in association with the Department of Chemicals and Petrochemicals (C & PC) Ministry of Chemicals and Fertilizers, Government of India and with the support of Government of Gujarat is organizing the 4th International Conclave on Construction Chemicals on 9-10th January, 2013 at Ahmedabad. I am happy to note that a Knowledge Paper which provides a status report and highlights the opportunities in the sector has been prepared. I am sure the Conclave will be a thought provoking and interesting event providing the direction for the future of the industry.

(Sd/-)

Naina Lal Kidwai

Message



Deepak C Mehta

Chairman - National Chemicals Committee of FICCI
Vice Chairman & Mg Director - Deepak Nitrite Ltd.

The Indian Construction Chemicals industry termed as a "sunrise industry" is growing at a rapid pace. The use of construction chemicals is still negligible in India because of the low market awareness. Same is picking up with overall economic growth with emphasis on infrastructure development. However, the market is still very small when compared to other global markets but the prospects of its further growth are very bright in the coming years. There is need to create awareness about the role of this sector.

Federation of Indian Chambers of Commerce and Industry (FICCI) in association with Department of Chemicals and Petrochemicals (C & PC) Ministry of Chemicals and Fertilizers, Government of India has organized three editions of "Construction Chemical Conclaves" during 2010, 2011 and 2012 at Mumbai, Bengaluru and Chennai respectively) very successfully to bring focus to the sector with the aim of raising awareness about this important segment of Indian Chemical industry. Now the next Conclave in the series which is also being supported by the Government of Gujarat, is being held at Ahmedabad on January 9-10th, 2013.

I wish all the success to the Conclave.

A handwritten signature in black ink, appearing to read 'D Mehta', written over a horizontal line.

Deepak Mehta

Foreword



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By virtue of working closely with construction chemical companies on various strategic business issues, we have had the added advantage writing this report. This report attempts to provide an overview of the construction chemicals market, its growth prospects and challenges it faces today. We also recommend strategic initiatives for manufacturers and end users to bring about a radical transformation in the way it's perceived.

The construction chemicals industry has evolved significantly in past decades with new and complex molecules enhancing properties such as strength, reduced water requirement, increased resistance to abrasion and corrosion etc. For example, between 1920 and 2004, the diameter of a pillar needed to support 100 tons weight has reduced from 100 cm to only 10 cm.

Indian construction chemicals market has grown at 17% per annum historically. It is estimated to be approximately Rs. 3,100 Crores in FY 12. While the growth rate is strong, still the penetration level of construction chemicals is very low in India as compared to other peer countries. This is primarily due to low awareness of products and their benefits at application levels by end users.

Going forward the focus will be on price to performance ratio and not price alone. Also, changing regulatory environment and increasing compliance with international manufacturing standards will be driving the requirements of construction chemicals.

We are grateful to FICCI for giving us this opportunity to partner with them in the preparation of this Knowledge Paper.

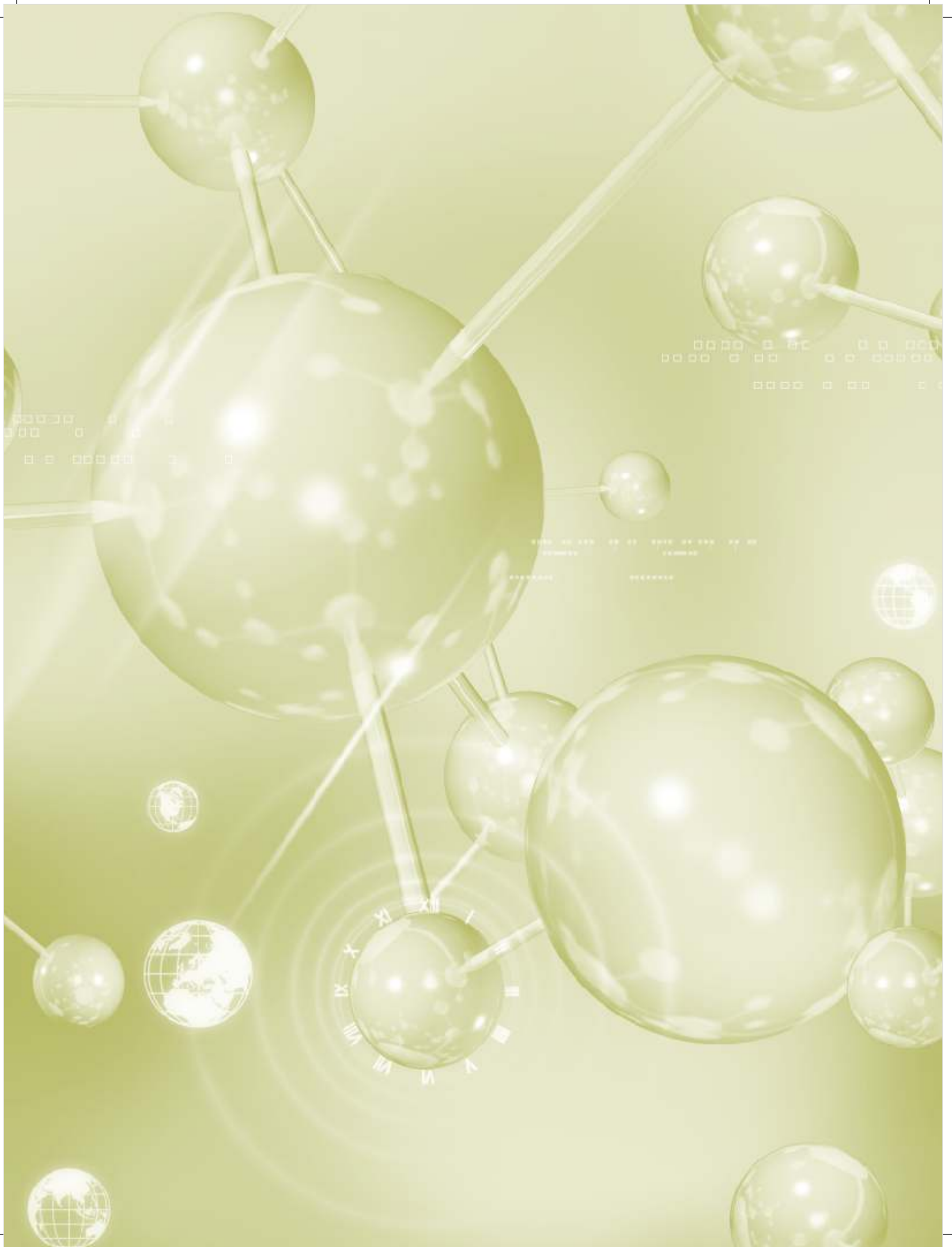
It was an exciting and enriching experience for TATA Strategic (Chemicals) team to put this report together in a short time and we sincerely hope this sets the motivation for usage of most modern products in Indian Construction Chemicals industry.



TABLE OF CONTENTS

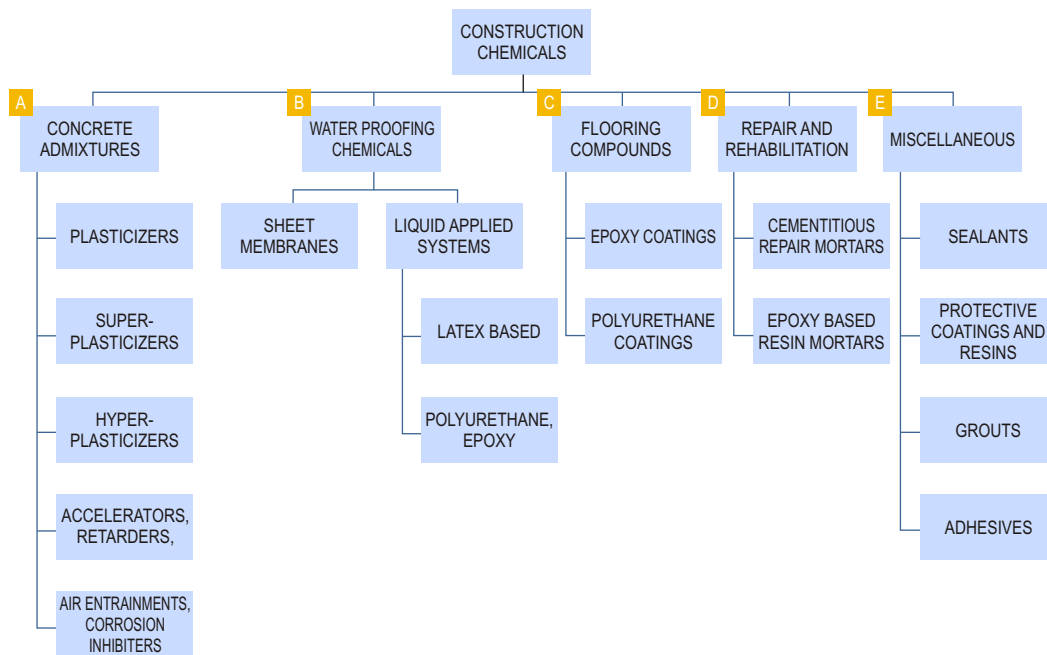
Topic Page No.

I.	Introduction to Construction Chemicals	01
II.	Global Market Overview	02
III.	Indian Market Overview	06
	a. Market size and past growth	06
	b. Construction chemicals segments	06
	c. Major players	07
	d. Key challenges	07
	e. Growth drivers and future outlook	9
	f. Critical success factors	12
IV.	Annexure I	13
V.	Annexure II	17
VI.	About Tata Strategic	19
VII.	About FICCI	Back Page



I. Introduction to Construction Chemicals

Construction Chemicals, as the name suggests, are the chemical compounds used in construction activities, be it residential, non-residential or non-building. These compounds belong to a niche specialty segment of the chemical industry and can be used either in existing construction projects to speed up the work or in new construction projects to impart durability and strengthen the structures. Construction chemicals increase the cost of the project by 2-5% but the benefits are multi-fold. Certain chemical products help in minimizing the quantities of cement and water used in the construction. These compounds impart chemical as well as physical properties in applications such as cross-linking or phase change (from liquid to solid). Construction chemicals are essential for high quality concrete and for promoting the improvement of concrete performance. They also increase the life of construction work and impart additional protection from environmental hazards. Based on end use applications, these compounds can be broadly classified into five categories.



*The Technical details of these segments are given in Annexure I

II. Global Construction Chemicals Market

Globally, the construction industry contributes about 9% to the global GDP and plays a crucial role in every economy. The construction market in Asia Pacific is the largest in the world, where 65% of the world's total cement is produced. China has the largest share i.e., 44% of world cement production and India accounts for 5% of world cement production.

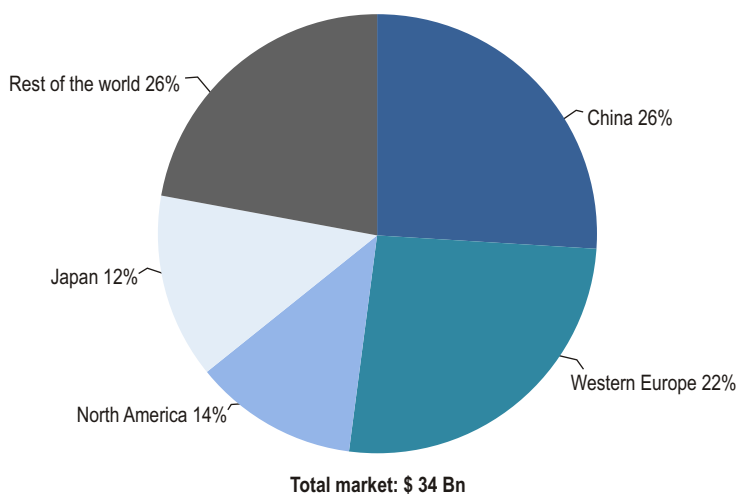
Worldwide there is a trend of increasing urbanization and formation of mega-cities. Rising living standards and aging population have a direct impact on the way we build and live, which demands quality construction work.

Construction chemicals industry has a variety of products, ranging from admixtures to flooring chemicals, sealants, grouts, and water-treatment chemicals. These products find extensive usage in the construction industry. The strength of concrete has increased dramatically due to development of construction chemicals. Between 1920 and 2004, the diameter of a pillar needed to support 100 tons has reduced from 100 cm to only 10 cm. Non-residential construction activities are the largest end-use segment of construction chemicals.

The raw materials needed for the production of construction chemicals are manufactured by the chemical companies. Polymers are the most important group of raw materials and they are prevalent in every construction chemical formulation, ranging from admixtures to water-proofing chemicals. In order to develop new construction chemicals, the chemical manufacturer needs to interact with construction industry experts and end-users. The construction chemical industry spends about 3% of its sales on R&D of new products and applications.

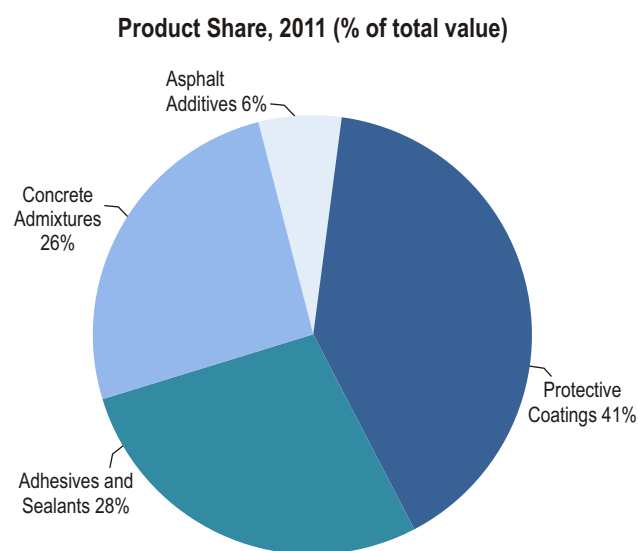
Global Construction Chemical Consumption by Segments, 2011 (%)

1. Market size and product share



Source; Industry Reports, Tata strategic Estimates

The global construction chemicals market was ~\$ 34 Bn in 2011. China and Western Europe are the largest construction chemicals markets with a share of 26% and 22% respectively. China has overtaken USA as the world's leading market of construction chemicals and is expected to remain the largest upto 2015. Other major markets include North America and Japan which accounted for 14% and 12% market share, respectively. Countries with rich natural resources (Russia, Brazil, Australia, etc.) are also expected to have high growth rates in construction chemicals market.








Total market: \$ 34 Bn

Source: Industry Reports, Secondary Research

The global construction chemical industry produces a wide range of concrete admixtures, asphalt additives, protective coatings, adhesives and sealants. Protective coatings have the largest share of the total construction chemicals market accounting for 41%. Adhesives & sealants and concrete admixtures account for 28% and 26% of the total construction chemicals market respectively.

2. Major players

The global construction chemical industry is fairly consolidated and is dominated by a relatively small number of companies. Major players can be listed as follow:

Company	Description
	BASF is a leading producer of construction chemicals worldwide. It provides concrete admixtures and additives as well as construction systems.
	W.R. Grace & Co. is a specialty construction chemical manufacturer which produces performance enhancing concrete admixtures, cement additives, fireproofing and waterproofing materials.
	Sika Construction is a global leader in roofing, waterproofing and flooring. It is second largest producer of concrete admixtures.
	Mapei International provides installation product solutions for flooring, tile and concrete restoration.
	The product portfolio of RPM International includes Euclid Chemical (concrete admixtures) and DAP (adhesives and sealants).

Other important players are Bostik, Elotex, Henkal KGaA, Dow Chemicals and Fosroc etc. A lot of mid-sized companies also operate successfully on a regional basis.

3. Growth drivers

The growth of construction chemicals is mainly driven by growth in the end use industry i.e. construction industry. Rapid developments in emerging countries and use of innovative products and materials in construction activities have supported the growth of construction chemicals markets. Construction activities are driven by continuing industrialization and urbanization. Increasing construction expenditures in both new construction and improvement & repair projects will drive the demand for construction chemicals.

Globally, coatings and sealants are expected to remain the largest construction chemical segments. Demand will be driven by their established use in all major construction markets as well as by a shift toward higher priced, water based products. Polymer flooring will be the fastest growing construction chemical segment in coming years. This is mainly due to a lower base and increasing penetration of these products in high-end car park applications. Demand of caulks & adhesives and cement & asphalt additives will be primarily driven by improving standards in building construction markets.

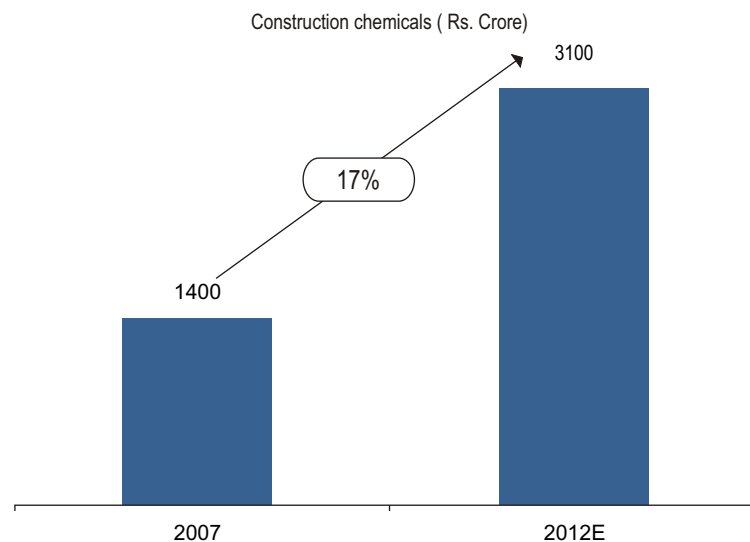
4. Key trends

- ❖ **Increased globalization:** Similar to other areas of specialty chemicals sector, the construction chemical industry is also likely to be affected by increased globalization and significant consumption growth in developing markets such as Brazil, China, India, Russia etc.
- ❖ **Increased focus on quality:** Currently, the focus is on improving the general quality of construction. There is also a huge demand for higher priced, value-added products, for both decorative and structural applications.
- ❖ **Raw material sourcing:** Globalization may support competition through low-priced imports of raw materials. This may pose a threat for high-value products such as adhesives and sealants, while formulated products are likely to be unaffected by low-priced imports as the transportation costs are high for these products. Sourcing of raw material may be a key driver for competitive advantage. As a large number of raw materials sourcing choices are available, compounders and formulators might have to explore options such as make or buy and backward integration economics. Tactical sourcing decisions are likely to be more effective to address the critical challenges such as uncertain energy prices and volatile pricing of petroleum based raw materials.
- ❖ **Changing government policies:** The construction chemical industry may find opportunities to address energy conservation and sustainability. Government policies that promote the use of energy saving materials and environment friendly specialty chemicals will benefit the suppliers. Demand for environment friendly performance chemicals, such as waterborne coatings, is expected to rise.
- ❖ **Shift to improved packaging:** Construction chemical companies may consider to shift to expensive packaging improvements to reduce the labour and injury cost. Companies in USA, Canada, Western Europe and Japan could recognize more benefits as labour and injury costs are very high in these regions as compared to the developing world.

III. Indian Construction Chemicals Market

The Indian construction chemical market is highly competitive and with an increasing number of global construction companies making a foray into manufacturing operations in India, the industry is becoming more attractive and experiencing strong growth.

1. Market size and past growth

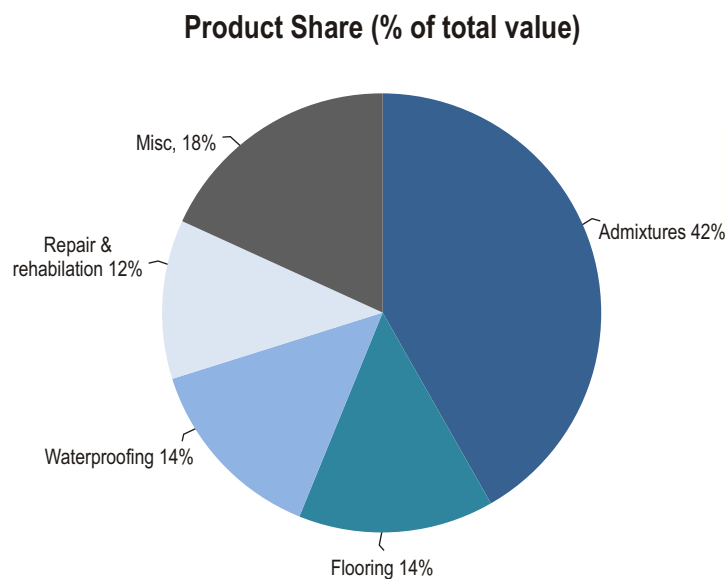


Source: Industry Reports, Tata Strategic Estimates

The Indian construction chemicals market has shown a strong growth rate of ~17% p.a., historically due to the construction boom in India and growing awareness in the industry for better quality of construction. It has increased from Rs. 1,400 Crores in 2007 to Rs. 3,100 Crores in 2012. With the economic slowdown, the growth slowed down in 2009, but has regained momentum thereafter.

2. Construction chemicals segments

In 2012, concrete admixtures accounted for 42% of the total construction chemicals market, while flooring and waterproofing chemicals had a share of 14% each. Other segments include sealants, grouts and adhesives which together account for ~18% of the total construction chemicals market. The share of flooring is high in Indian market as compared to developed world while India have low share of Tiling, Sealants and waterproofing. Indian construction chemical market has >80% business in new built



Source; Industry Reports, Primary & Secondary research

3. Major players

The overall market is fairly consolidated but there is considerable fragmentation of individual products and application areas. There are a large number of global construction companies who have set up local manufacturing operations in India. The top 5 players account for ~50% of the market; the rest comprises of small and unorganized players. In the past there has been a considerable change in the market share of companies due to which Medium-sized and regional manufacturers have gained considerable share of market. FOSROC and SIKA India Pvt. Ltd. are the largest players in the Indian construction chemicals industry. Other key players include BASF, Pidilite and SWC (Structural Waterproofing Company Pvt Ltd). There are many other regional and smaller players as well. Approximately 300 companies are estimated to be operating in this segment.

***The Major Player profiles are given in Annexure II.**

4. Key challenges

The construction chemicals market in India is still highly under-developed when compared to other countries, such as China, which is much larger at nearly ~\$ 7.9 billion. Consumer awareness is very low regarding new chemical techniques and construction aids. Margins are lower because most contractors prefer low-cost chemicals to reduce the overall construction cost. High value products have limited demand and are used only by premium construction houses. Some of the key challenges faced by the industry are as follows:

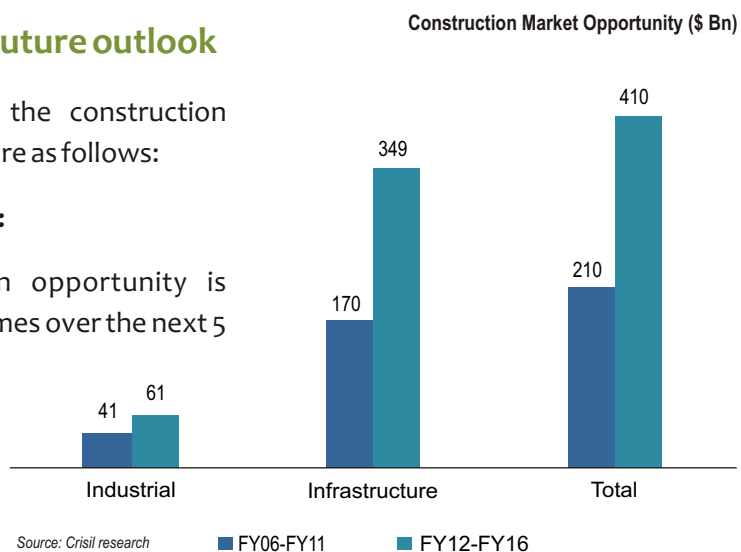
- ❖ **Price sensitive market:** Indian construction chemicals market is highly cost-conscious. The customers demand the best quality at very low prices. However, they are still not fully aware of the benefits of various construction chemicals and hence tend to use low-cost substitutes. Decisions are taken based on immediate cost not on overall cost of ownership (life-cycle cost) basis.
- ❖ **Low entry barriers:** The construction chemicals market is comprised of large MNCs as well as several local small-scale manufacturers. Due to low entry barriers, competition is high and several low value products are being sold in the market.
- ❖ **Low awareness levels** among contractors about the use of right type and quality of construction chemicals for durable structures. The durability of material is not been studied extensively by the manufacturer under Indian condition. The chemical protection and maintenance is not well understood to the user. The application tools or accessories need to be updated. The code provision or the user guide line with product is missing
- ❖ **Unskilled labourers:** The practice of employing unskilled workers in construction activity is still hampering the growth of the sector, as construction chemicals are sensitive products and their use requires basic technical expertise and training.
- ❖ **Lack of stringent regulations:** The industry lacks in relevant consumer standards for construction. Market participants are also frequently challenged by the absence of quality standards for manufacture and application of construction chemicals which leads to price wars.

5. Growth drivers and future outlook

Key growth drivers for the construction chemicals market in India are as follows:

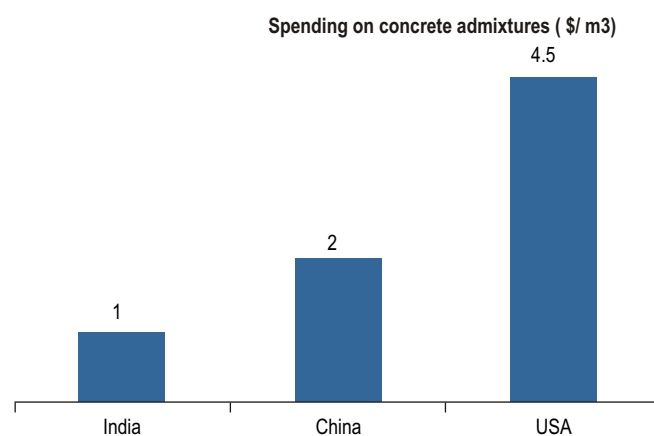
- ❖ **Growth in end-use market:**

The Indian construction opportunity is expected to grow by 1.9 times over the next 5 years.

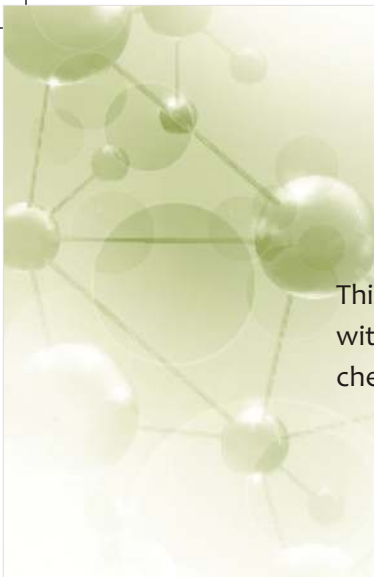


This growth will be driven by investments in the infrastructure segment, which are expected to almost double over the next 5 years. Government spending has been one of the key drivers of the growth of the construction industry. The financial constraint on the government has been reduced by several public-private partnerships, hence increasing the focus on development. Other growth drivers are as follows:

- o National Manufacturing Policy which aims at enhancing share of manufacturing in national GDP from 16% to 25% by 2022.
 - o Focus on infrastructure development : Government of India's commitment to increase spend in infrastructure to 10% of GDP in the 12th Five-Year Plan
 - o Rising aspirations of large middle income group and changing demographics driving demand for residential real estate
 - o Increasing urbanisation: ~30% of Indian population is urban and Urbanization to grow to 40% by 2030
 - o 100% Foreign Direct Investment (FDI) in real estate to boost construction activities
 - o Increasing acceptability of ready mix concrete (RMC) is also leading to increased demand for construction chemicals. Currently, the use of RMC in construction is around 7% of domestic cement demand. This is expected to rise to 20 to 25% over the next few years
- ❖ **Increasing penetration of construction chemical products:** The penetration level of construction chemicals is very low in India as compared to other countries.



Source: Secondary research, Industry reports

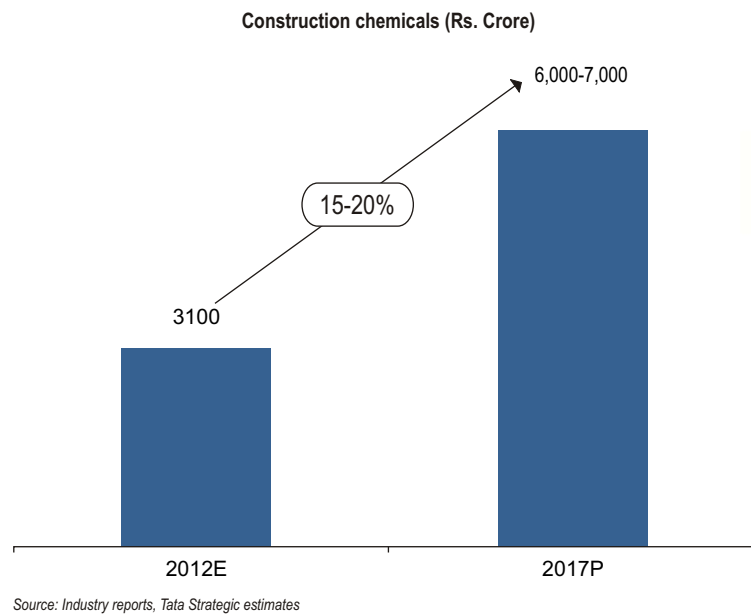


This is mainly due to insufficient understanding of the benefits of these compounds along with a lack of technical skills to use construction chemicals. However, construction chemicals are finding increased usage driven by:

- o Increasing awareness about quality construction materials such as performance-enhancing products among consumers and builders, leading to increased usage of newer products like ready-mix concrete, etc.
- o Increased construction activities triggered by urbanization and development of rural areas which are still largely untapped markets
- o The use and access to foreign technology and the entry of foreign companies in the construction chemicals sector has eventually resulted in quicker growth of the construction chemical sector. Today several projects funded by multilateral agencies like ADB and World Bank have made use of good quality construction chemicals mandatory
- o Architects and consultants have realised the importance of quality construction chemicals and they generally tend to specify trusted brands of construction chemicals
- ❖ **Changing regulatory environment:** Current and prospective regulatory guidelines incentivizing energy-efficient and green buildings will drive demand for suitable, innovative protective coatings and safe chemicals
- ❖ **Increasing compliance with international manufacturing standards:** Actions are being taken to implement relevant consumer standards matching with international standards. This will help increase the current penetration levels of construction chemicals. For example, ban on onsite mixing of concrete would reduce pollution levels and generate demand for ready-mix concrete admixtures

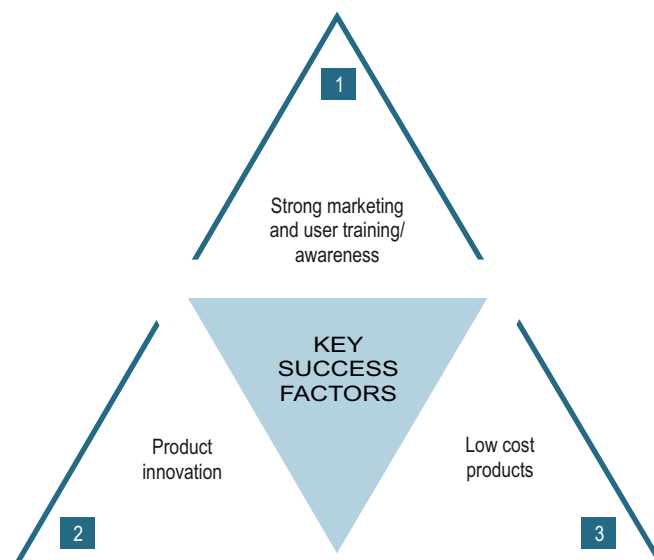
Construction chemicals market has a huge growth potential due to the construction and manufacturing boom in India. With growth primarily driven by increasing construction activities in both new construction and repairs & rehabilitation technologies, demand for construction chemicals has increased. Many newly developed products give better performance and results. Hence, there is a shift in demand towards products offering better performance value-added products such as silicon caulks, specialty cement additives, polymer-based grouts and mortars etc.

The Indian construction chemicals market is expected to show high growth rate of 15-20% p.a., in the future. It is expected to reach Rs. ~6,000-7,000 Crores by 2017 mainly driven by the untapped potential of the market and steady growth in the construction industry over the next 5 to 7 years.




6. Critical success factors

Product innovation, producing low cost products and creating product awareness among end-users are critical to emerge as a successful player in this cluttered market.



- ❖ **Strong marketing and user training/awareness:** Effective marketing of products is essential to make users aware of their applications and benefits. Manufacturers could consider investing in programmes to educate construction contractors about the benefits of using superior construction chemicals, in terms of lower project completion time and ease of usage. Providing technical training to workers about appropriate usage



of these chemicals in construction will ensure correct application and better results, reinforcing the customers' belief in the utility of construction chemicals. It is imperative to maintain long-term relationships with customers and exert influence over channel partners to retain foothold in the industry. Construction chemical companies could focus on establishing relevant consumer standards such as on-site mixing of concrete and energy consumption in buildings by effectively liaising with the government and the construction industry. Another success factor would be the ability to deliver the product at the consumer's doorstep.

- ❖ **Product innovation:** Product innovation requires international standards. Focus on sustainability / green aspects, corrosion issues (which takes almost 3% of national GDP) will require innovation. Construction chemical manufacturers must focus on development and marketing of innovative products (e.g. silicon-based sealants) which are expected to outgrow traditional products.
- ❖ **Low cost products:** Companies with innovative, low cost products are likely to capture significant share of the market. Given the low awareness and price sensitive nature of the market, it will be challenging to get consumers to accept more expensive products. Thus product innovation must also focus on creating affordable products with wide applications. Specializing in specific chemicals such as water proofing or concrete additives or anti-leak agents could be a potential strategy to gain expertise in select sub-segment and provide quality products and services to customers at affordable prices.

Other critical success factors include:

- ❖ **Formation of usage standards/ norms and guidelines:** Proper user guidelines and standardization of norms is required.
- ❖ **Skilled manpower:** Know-how of product application and familiarization with safety guidelines would demand skilled labours in the industry.

This report has been authored by:

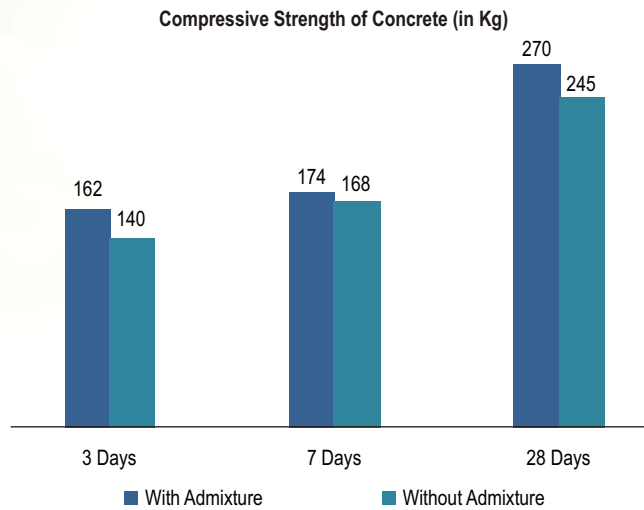
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IV. Annexure I: Classification of Construction Chemicals-Technical details

A. Concrete admixtures

Cement is a widely used non-metallic material of construction and is mixed with crushed rock, sand and water in specific proportion to produce concrete. For getting better results, better workability, more strength, and finishing, cement or mortar admixtures are used. Chemical admixtures are added to the mix immediately before or during mixing. Admixtures are primarily used

- o To reduce the cost of concrete construction
- o To modify the properties of hardened concrete
- o To ensure the quality of concrete during mixing, transporting, placing, and curing
- ❖ Admixtures aid in the production of high-strength, durable concrete, used for intricate architectural designs. They allow concrete to flow, thus increasing application time and ease of use and preventing the concrete components from segregating.
- ❖ Successful use of admixtures depends on the use of appropriate methods of batching and concreting. Most admixtures are supplied in ready-to-use liquid form and are added to the concrete at the plant or at the jobsite.
- ❖ Normally, admixtures carry less than 0.5% by mass of cement.
- ❖ It is estimated that 50% of concrete produced in India these days contains one or more types of admixtures.
- ❖ 80% of ready-mixed concrete is produced using fly ash and at least 70% of produced concrete contains a water-reducer admixture.



Source: Industry reports, Secondary research

Chemical admixtures can be broadly classified as follows:

- ❖ **Plasticizers:** They are also called as water reducing admixtures. They increase the workability of fresh concrete and decrease the consolidating effort.
- ❖ **Super-plasticizers:** These are also called high range water-reducing admixtures, and are a class of plasticizers which have fewer deleterious effects when used to significantly increase workability.
- ❖ **Hyper-plasticizers:** These are referred as third generation admixtures. They have the capability of ensuring very good flowability at very low water to cement ratios.
- ❖ **Accelerators:** They speed up the setting (hydration) time. Sodium and calcium chlorides are basic salts with accelerator properties.
- ❖ **Retarders:** These slow the hydration of concrete. They are used in large and difficult pours, where partial hydration pouring is undesirable.
- ❖ **Air entrainments:** Air entrainments add and distribute tiny air bubbles in the concrete that reduce the damage during freeze-thaw cycles, thereby increasing the durability of concrete.
- ❖ **Corrosion inhibitors:** They are used to minimize the corrosion in steel and steel bars in concrete.

B. Water proofing chemicals

- ❖ Water proofing caters to various end use applications with products such as polymer-modified cementitious composites, elastomeric polyurethane, water proofing concrete, expanded polyethylene, polysulphide sealants, polyurethane systems, water

repellents, and butyl & acrylic sealants, depending on the need or damage to the structure.

- ❖ Water proofing compounds are available in liquid, solid, slurry and two-component coating forms. These products could be urethane based, modified asphalts, clay based or rubber polymers.
- ❖ Water proofing compounds are designed to stop water infiltration. These compounds or membranes can be extremely effective when applied on the exterior of a foundation system.
- ❖ Application of the water proofing compounds can be done by implant treatments i.e. either dipping or spraying or by low-pressure spraying on the surface.

C. Flooring compounds

- ❖ Flooring compounds are mostly epoxy and polyurethane based.
- ❖ Industrial flooring compounds are used to meet various industrial needs such as abrasion, load impact, chemical attack, moisture penetration, strengthening of damaged floors, as well as improving the aesthetic appeal of the floor.
- ❖ They are also used to provide certain special features such as slip resistance, static resistance, fire resistance, antibacterial properties, and so on.


D. Repair and rehabilitation

- ❖ The repair and rehabilitation is a highly unexplored and underdeveloped market.
- ❖ Retrofitting is basically addition of new technology or features to older systems and improving the structures with energy efficiency.
- ❖ Rehabilitation is reconstruction of the structural components which were damaged.
- ❖ These products include cementitious repair mortars, concrete floor repairing systems, polyester and epoxy-based resin mortars, moisture insensitive epoxies, structural additives, synthetic adhesives, rust removers and corrosion inhibitors.
- ❖ The main rehabilitation methods are concrete jacketing, Steel Jacketing and FRP wrapping

E. Miscellaneous

a. Sealants

- ❖ Sealants are used to seal expansion joints, cracks, joints in concrete roads and to fill gaps between concrete. There are four types of sealants. These are:

- 
- o Polysulphide sealants: These are most commonly used in the construction industry as expansion joints for concrete roads, structural joints and others.
 - o Polyurethane sealants: These are used for high-end applications where high flexibility and bonding strength are required.
 - o Silicone sealants: These are generally used where good bonding is required between two dissimilar surfaces such as fixing of glass on metal frame.
 - o Acrylic sealants: These are generally used for crack or gap filling and for day-to-day applications such as windows and door gap sealing, etc.

b. Protective coatings and resins

The protective coatings include high performance waterproof coatings and epoxy resins. These are paints or coatings with more emphasis on protective properties rather than aesthetic properties. They provide excellent bonding, sealing and dust binding characteristics. The most common use of industrial coatings is for corrosion control of steel or concrete.

c. Grouts

❖ Grouts are compounds used for giving extra strength for the foundations of load-bearing structures. They are also used for repair and sealing of cracks and gaps. Grouts have different chemistries depending on the applications as discussed below:

- o Epoxy-based liquid grouting compounds are mainly injected into the walls to fill hairline cracks and gaps, thereby improving the strength of the structure.
- o Cementitious grouts are used for imparting extra strength to machine foundations, base plate or anchor bolts for machines or equipment and others. They are also used for repair of building structures and in heavy industries such as steel, power plants and ports.
- o Polyester-based grouts are also available, which are used for anchoring to impart strength to foundations that must be achieved in limited available space. Grouts can also be made to have special characteristics such as fast setting, free flow, on-shrink and others by addition of different additives as per the end-user requirement.

d. Others (Tile adhesives)

❖ Tile adhesives are used for fixing tiles on the floors, walls, swimming pools and others. Tile adhesives are based on cement and polymer formulation (mainly acrylic polymer).

V. Annexure II: Major Players


Brief profile: Fosroc India

Fosroc India www.fosroc.com 	
Company overview	<ul style="list-style-type: none"> Wholly owned subsidiary of Fosroc International
Key products	<ul style="list-style-type: none"> Admixtures, joint sealants, surface treatments
Manufacturing locations	<ul style="list-style-type: none"> Bangalore Ankleshwar Rudrapur

Brief profile: SIKA India

SIKA India www.sika.in 	
Company overview	<ul style="list-style-type: none"> Convened India operations in 1987 Subsidiary of Switzerland-based parent company
Key products	<ul style="list-style-type: none"> Waterproofing: Sikacim Tiling: Sika Tilofix Sealing: SikaBoom
Manufacturing locations	<ul style="list-style-type: none"> Kalyani, West Bengal Goa Jaipur Blending units in Mumbai and Chennai

Brief profile: BASF Construction Chemicals Division

BASF Construction Chemicals Division www.basf-cc.co.in 	
Company overview	<ul style="list-style-type: none"> Wholly owned by the BASF group
Key products	<ul style="list-style-type: none"> Concrete admixtures, joint sealants, flooring and waterproofing
Manufacturing locations	<ul style="list-style-type: none"> Turbhe, Navi Mumbai


Brief profile: Pidilite

Pidilite www.pidilite.com		
Company overview	<ul style="list-style-type: none">Started operations in 1959, a pioneer in consumer and specialties chemicals in India	
Key products	<ul style="list-style-type: none">Adhesives and sealants	
Manufacturing locations	<ul style="list-style-type: none">Himachal PradeshMaharashtraGujarat	

Brief profile: SWC

Structural Waterproofing Company Private Limited (SWC)	
Company overview	<ul style="list-style-type: none">Established in 1930
Key products	<ul style="list-style-type: none">Concrete admixtures, waterproofing and cement grinding aid
Manufacturing locations	<ul style="list-style-type: none">Mumbai (Vapi)Kolkata (Salt Lake)New Delhi (Noida)Chennai (Ambattur)

Brief profile: Balmer Lawrie

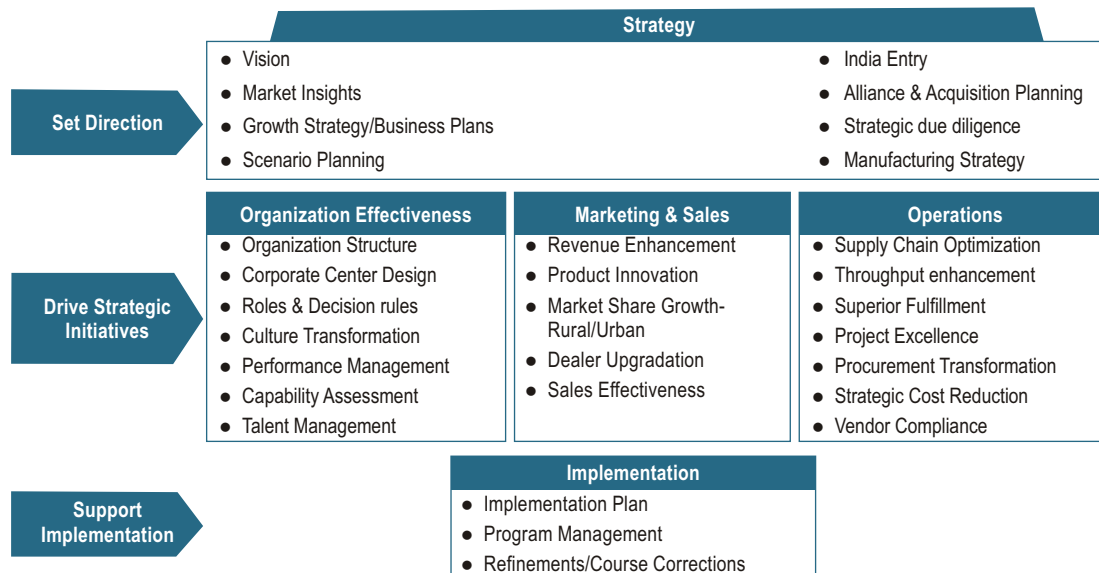
Balmer Lawrie www.balmerlawrie.com		
Company overview	<ul style="list-style-type: none">A Mini- Ratna public sector enterprise under the Ministry of Petroleum & Natural Gas	
Key products	<ul style="list-style-type: none">Super plasticizers	
Manufacturing locations	<ul style="list-style-type: none">Manali, Chennai	

VI. About Tata Strategic

About Tata Strategic:

Tata Strategic Management Group is the largest Indian Owned Management Consulting Firm. Set up in 1991, Tata Strategic has completed over 500 engagements with more than 100 Clients across countries and industry sectors, addressing the business concerns of the top management. Today more than half the revenue of Tata Strategic Management Group comes from working with companies outside the Tata Group. We enhance client value by providing creative strategy advice, developing innovative solutions and partnering effective implementation.

Our Offerings



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