

WHITE CEMENT MARKETING AND PROMOTION

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ABOUT THE AUTHORS

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SYNOPSIS

The article shares the authors' experience with white cement applications in developed countries and uses these learnings to suggest ways to expand the size of the white cement market in India.

PREAMBLE

Consuming around 113 mio tonnes of grey cement in 2003, India is the world's 2nd largest consumer of grey cement. The 1st position is dominated by China, which consumes around 600 mio tonnes per annum.

It would seem to follow as a logical corollary that India would also be one of the largest consumers of white cement. But this is not the case. India consumes only around 0.6 mio tonnes of white cement per annum, when smaller countries like France, Italy and Spain, which consume less than half the grey cement volume of India, consume more white cement.

The objective of this article is to understand white cement applications in developed countries and use these learnings to expand, if possible, the size of the white cement market in India. While direct comparisons may not be appropriate, due to differences in construction practices as well as economic and social factors, this paper is intended to illustrate the observations made by the authors during their visits to these countries. The objective is to seek their possible emulation in India in the foreseeable future.

Vital Statistics

The global demand for white cement is of the order of 12 mio tonnes, and is forecasted to grow at a rate of 6– 8 % per annum, significantly higher than the global growth rate of 3 % per annum for grey cement.

Item	India	France	Italy	Spain
Grey cement consumption - '000 tpa	113,000	20,727	41,000	43,500
Grey cement - PCC in kgs	105	344	704	1,069
White cement consumption - '000 tpa	600	520	500	1,154
White cement - PCC in kgs	0.6	8.6	8.6	28.4

White Cement Applications:

White cement applications differ from country to country. These are based on the construction practices prevailing in each country, the purchasing power of the end user, the GDP of the country - indicative of its relative affluence, and the awareness of new application drives undertaken by producers/ other stakeholders.

In white cement, a strong linkage/ association between the white cement producers and the white cement based product manufacturers is seen to promote the demand of cement. An example of this is in France, Italy and Spain, where white cement producers have strong linkages with the tile industry, pre-fabrication industry, and architects. This linkage has led not only to the higher usage of white cement, but has also enabled white cement producers to change quality parameters to meet specific, user-defined, needs.

Some of the more popular applications of white cement are in making terrazzo tiles, pavers, dry mixes like mortar, tile adhesives, white cement based paints, pre-fabricated products like artificial walls, etc.

Italy and Spain are well known for their tiles industry and white cement is used to make not only tiles, but also, to some extent, floorings. As the tiles industry is booming in both these countries, the demand for white dry mixes has also seen an upward turn. The dry mix industry uses a substantial quantity of white cement to make products such as tile adhesives and mortar. White cement is supplied to users in bulk (for the dry mix industry) and as RMC (for the pre-fabricated product industry). The larger pre-fabricators have their own batching plants to meet their concrete needs.

France extensively uses white cement for architectural work. The trend is shifting from glass and steel buildings, back to concrete buildings, where white cement is used extensively for aesthetic reasons. One of the advantages, apart from aesthetics, is that less artificial light is required to illuminate interiors, and additives can be added to white cement to bring out the desired colours. White concrete is supplied directly by a variety of RMC suppliers in France.

Segmentation and Products

The white cement market in Italy, France and Spain is segmented into residential, commercial, industrial and public buildings. The public buildings and commercial segments are seen to consume nearly 80% of the white cement, The industrial and then residential segments consume the balance. Segment-wise applications are described below :

Residential segment: The main application areas are in repair works, tiles and their fixing and white cement based prefabricated products. The main products being consumed by this segment include dry mixes, tiles & floorings, balustrades, banisters, artifacts, etc. The driving factors include convenience in usage, quality, product range and aesthetics.

Commercial segment: This segment too, utilizes white cement for repair works and tile fixing. Primary products include tiles and dry mixes (apart from tile adhesives, the usage of mortar in repair works exists).

Industrial segment: The industrial segment like the commercial segment uses white cement for repairs and tiles & pavers related works. This segment is seen to use white cement in improving the external facades of their establishments. The usage of white concrete, apart from dry mixes, white cement based tiles & floorings and white cement based adhesives, is beginning to pick up.

Public buildings' segment: This is the largest consuming segment in most parts of Europe. The main application areas include creating facades, white cement based tile adhesives, white cement based statues and pavers. This segment has more purchasing power than the other segments. The need for distinctive buildings is the main driver. This driver has led to a higher use of white cement in architectural works.

The other reasons for the extensive usage of white cement in these countries are given below, segregated in terms of applications/ product groups.

Concrete :

White concrete typically constitutes 40-50% of the white cement consumption. Concrete products include RMC and white cement based prefabricated products.

The main drivers for white concrete are:

- Tradition of white buildings in Spain. This too is a strong contributory factor in the use of white concrete in architectural works
- Need for aesthetics in Italy.
- Higher spending power in all the 3 countries.

Dry Mixes :

White cement based dry mixes also constitute around 40-50% of the total white cement consumption. Dry mixes primarily include white cement based tile adhesives, paints and mortar - the main product being tile adhesives. The main driver for these dry mixes is the presence of a large tile industry. Italy & Spain are particularly known for their tile industries and are reportedly constitute the largest exporters of tiles, worldwide. The booming tiles industry has created a strong demand for tile adhesives and mortars. White cement based tile adhesives are becoming very popular now and this has further spurred the demand for white cement in this industry.

Tiles and Pavers :

Tiles and Pavers constitute around 5-10% of white cement consumption. Tiles and pavers are very common in Italy and Spain.

The main reasons for their extensive usage are:

- Savings effected in Labour/ Time – Since labour is very expensive, prefabricated pavers & tiles are less expensive than the cost of making white cement based tiles/ pavers at the site.
- Design Range – Prefabricated tiles and pavers, enable manufacturers to create new designs (colours, sizes, etc) to meet the developing needs/ tastes of end users.
- Cement Industry Support – The cement industry in Spain is seen to work closely with the tile industry in developing new kinds of tiles. The work ranges from making new designs to making larger, yet lighter, tiles.

Cement Types

White cement is available in two types - CEM I and CEM II. CEM I is white cement with clinker more than 95% and CEM II is white cement with clinker between 80% and 94%. Within each type of cement, there are 3 sub-categories based on the compressive strength, viz., 32.5, 42.5 and 52.5 Mpa. The above cement types are additionally available with different Early and Late setting times. Usually, cement with whiteness more than 85% is considered as white cement by the local standards and practices.

Packaging

The packaging is market driven. Since the majority of customers are large users, it is not surprising that white cement is largely delivered to the customers in bulk. It is observed that cement in bulk constitutes between 80-90% of the total consumption. Packed cement is usually available in 25 and 50 Kg bags.

Prices

Bulk white cement prices, for example in the first quarter of this year in Italy, were in the range of Euro 125-175 for 32.5 grade to 52.5 grade, when the grey cement bulk prices were in the range of Euro 75 – 95 for the same grades. 50 Kgs bags are around 10% more expensive and 25 Kgs bags are around 15% more expensive than bulk cement.

USAGE OF WHITE CEMENT IN INDIA

White cement in India was traditionally used to make floorings. With the passage of time and increase in purchasing power, this market has yielded itself to white cement-based, marble, ceramic and synthetic tiles. While white cement based tiles and floorings are moderately popular, these have to share market space with tiles made from the other alternate materials. White cement is also fairly popular in repair work and in the restoration of archeological memorabilia in which colour is often used to create the desired effect. In recent times the usage of white cement in waterproofing material (often mixed at the site itself) has increased.

The segment wise applications/ products are given below.

Residential segment - The main application areas are repair works, white cement based tiles and paints, white cement to bridge the gap between tiles and make floorings.

Commercial segment – The main application areas in this segment are the same as in the residential segment.

Industrial segment – The main application areas in this segment are white cement based tiles, floorings and pavers in the office/ factory premises. White cement based paints are also used extensively by this segment for the exteriors of the buildings. White cement based flooring is getting increasingly popular in industrial establishments as it gives the desired aesthetics while being less expensive than most tiles.

Public buildings – Extensive use of white cement is yet to be seen in public buildings. The main application areas are the same as those in the industrial segment.

The Residential and Commercial segment is envisaged to consume around 70% of the total white cement consumption in India, followed by the Industrial and Public buildings segment. The main drivers for each of these segments are the need for aesthetics and lower price. The usage of white cement in pre-fabrication works and even architectural works is low. Thus, there are no RMC producers who supply white concrete.

Cement Types

The IS standard only specifies that the compressive strength should not be less than 90% of that of 33 grade of OPC and the whiteness should be a minimum of 70%.

Prices

White cement is priced at around 3-4 times that of grey cement. Prices are in the range of Rs 350-425 per 50 kg bag.

One of the major reasons for the higher price is attributed to the fact that the 2 main white cement players are located in Rajasthan and the transport costs to consuming centres located all over India, are quite high.

Packaging

White cement is sold in packed bags. These include packaging sizes of 1 kg, 2 kg, 5 kg, 10 kg, 25 kg and 50 kg bags.

Reasons for lower usage in India

The relatively low popularity of white cement in India is possibly due to the following reasons:

- The Indian market is very price conscious. In India, white cement costs 3-4 times more than grey cement. In most developed countries the price differential is around 2-2.5 times.
- The purchasing power of the end user is significantly lower as compared to the purchasing power of the same segment say in France, Italy or Spain.
- India has cheaper labour. In France, Italy and Spain, labour is very expensive. Thus pre-fabricated products are more popular there. In India, since labour is used extensively, the labour/ mason/ contractor has a strong role to play in deciding the material to be used.

STRATEGY FOR INDIA

In summary, the main products and application in India are:

- White cement based tiles (both vertical and horizontal products)
- Using white cement to bridge the gap between tiles
- Preparing white cement based floors
- White cement based paints
- Repair works.

As already mentioned, the major consumers are the Residential and Commercial segment. Of the 0.60 mio tonnes of white cement being consumed in India, it is envisaged that these segments consume around 70%.

In more developed nations, these two segments constitute around 20-30% of the total consumption. In other words, the white cement industry has the opportunity of increasing its market size by 2-3 times by targeting the Industrial and Public buildings segment by offering them value-for-money products.

This section below highlights the strategy to be followed India to increase the market size for white cement.

Applications/ White cement based products

- Architectural concrete usage may be introduced in new constructions to give a more appealing look to facades. Glass and Steel buildings, that are in vogue today, will start getting replaced by the conventional concrete buildings as realization dawns that more electricity is consumed to condition the air since glass and steel are good conductors that keeps the interiors warm in summers and cold in winters.
- Products like banisters/ balustrades, etc and white cement based paints may witness a higher demand due to aesthetic reasons. This would be true for the upcoming upper middle class that is now flourishing due to higher disposable incomes.
- Usage of white cement for minor repair of buildings will continue to remain.
- White cement based tile adhesives. Adhesive, when applied below the tiles, tends to show up between the joints of tiles. White cement based adhesive would remove the need to hide the adhesive/ mortar that would usually show between the tiles. This would also lower the cost of material and labour.

Product Types

- Cement with various degrees of whiteness may be introduced to meet the needs of the users. The types may include:
 - Whiteness more than 95% and whiteness in the range of 80-94%. The former would meet the needs of product manufacturers who need more whiteness and the latter would meet the needs of users who need white cement with a lower degree of whiteness.
 - The industry should introduce white cement with different setting times and grades as each application needs different setting time and grades. For example, white cement tile (especially floor tiles) and white cement floors need a higher grade of cement to withstand the rigours of wear & tear.

Packaging

- The current trend of 1, 2, 5, 10 and 50 Kgs bags will need to be continued to cater to the multiple small volume customers in India.
- Bulk cement transportation will need to be introduced to meet the demand of larger volume users, like large construction companies, prefabricators and tile & tile adhesive manufacturers.

Pricing

- In order to introduce applications of white cement and increase the market size, prices will have to be lowered till they are around 2-2.5 times the prices of grey cement. Lower introductory prices, though will lead to reduced profitability, but will eventually lead to higher consumption of white cement products, thereby increasing the overall revenue and absolute profit for the white cement industry.

- As mentioned earlier, the 2 large white cement plants, viz., Birla White and JK White are based in Rajasthan. The third white cement player, Travancore Cement is based in Kerala. The larger players supply white cement all over India. This leads to very high freight cost which is also responsible for the higher prices in India.

India has very few high quality lime stone deposits from which white cement can be made. The identified lime stone deposits for white cement are in Gotan (Rajasthan), Kymore and Gujarat. White cement is also made from sea-shells (Travancore cement uses sea-shells to make white cement). In order to reduce the freight cost and increase the volumes, the industry can consider putting up plants at the identified white cement compatible lime stone locations and also in coastal areas like Tamil Nadu and Kerala where sea-shells are available to make white cement.

Promotion

Some of the important promotion tools that the white cement industry can undertake to expand the demand of white cement are:

- Create external linkages/ associations with manufacturing companies and associations/ institutions, architects, etc. This will lead to closer working relationships with manufactures and influencers. This, in turn, would spur product innovation and higher demand for white cement products.
- The industry could also consider creating a few architectural pieces/ buildings (even its own office) in white cement that can be open for display to architects/ contractors so that it further promotes the use of white cement in architectural usage.
- Creating technical support cells to educate the potential endusers about the usage of white cement. This would be a key in expanding the demand for white cement in India. Individuals, who currently do not have access to white cement application knowledge, can be appropriately educated on product features and usage.

CRYSTAL BALL GAZING

As seen earlier, the white cement applications in India are currently limited and the PCC is extremely low. Applications for white cement will grow as the per capita GDP increases to a point where the cement growth reaches the “rapid expansion” phase. The typical per capita GDP for this inflexion is around USD 600. This, coupled with higher exchange of architectural knowledge and construction practices’ know-how between the developing and developed countries will act as an impetus for white cement growth.

The drivers responsible for pushing up the demand are envisaged to be:

- Higher purchasing power - With affluence rising in metros and disposable income on the rise, there would be more money available to spend on aesthetics in metros. Thus white cement consumption will spur first in big cities.
- Higher per capita GDP - This is an indication of the overall affluence of the country. Cement consumption is strongly correlated to GDP growth. Higher per capita GDP would not only lead to a higher growth of grey cement, but also of white cement.
- Higher spending by the government – This will lead to not only more funds being spent on infrastructure, but also more funds available for better public buildings including their “look & feel”.
- Role of architects – As architects take the initiative of using white cement for architectural use due to aesthetic reasons and also because of enhanced global knowledge of construction & design practices, the consumption of white cement is envisaged to grow at a higher rate. New architectural designs’ usage will further increase to make compact yet aesthetic homes/ offices - this will lead to use of new construction material and practices.
- Lower prices - This will spur the demand for white cement products. White cement consumption will increase in the industrial and public buildings segment at a faster rate than then residential and commercial segment.

The authors feel, that given the right drivers, the demand could grow from its from current level of 0.6 mio tpa to around 1.5 mio tpa in the next 5 years. The feeling of over supply will reverse, as unexplored parts of the market will begin to be discovered and accessed. Prices are envisaged to stabilize in the range of 2-2.5 times the price of grey cement. The increase in demand could initiate renewed capacity building.

SUMMARY

The white cement industry has the opportunity to increase its market size in India given that the upper middle class and the rich class have higher purchasing power than earlier and financial loans are more easily available to this class.

The industry needs to take initiative by creating external linkages with certain associations whereby it can cooperate with them and assist in and prepare itself for the demand expansion in the future. Lower prices coupled with technical assistance to the endusers will expand the knowledge of and thus the demand for this "fairer cement".