Where Will Coatings Technologies be in 2015?

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The third oldest profession in the world, the paint and coatings industry is underappreciated and undervalued in the dynamics of its current value chain activities.

The paint and coatings industry has evolved over many years in a marketing culture that has failed to protect it against product value loss. Valued at more than $21.2 billion in North America, it is a slow growth industry with low growth numbers that track gross domestic product (GDP) rates.

Consolidation has dramatically shrunken the supplier and formulator base of the industry, which has also witnessed a staggering loss of business in North America due to the offshore movement of OEMs. Compared to the Consumer Price Index the paint and coatings industry lost 38 percent of its value in liquid coatings and 72 percent of its value in powder coatings over the past 35 years. This loss of value has occurred primarily at the formulator position in the supply chain.

When gathering intelligence throughout the industry value chain, accuracy loss during the product development stage is more than 80 percent, which means that as an industry we are grossly inefficient in building the right product.

There have been some bright spots on the new product development front over the years where, along with significant sales increases, profits have been sustained. Examples include electrocoat technology, UV and EB curable coatings and nanotechnology-based coatings.

However, with paint being such a ubiquitous product that is virtually everywhere one looks and often times is a key driving force when it comes to consumer purchasing decisions, paints and coatings are grossly undervalued.

Winners and losers

The $21.2 billion paint and coatings industry in North America is divided into three sectors— Architectural, Product OEM and Special Products. The architectural and special products sectors, which combined total $14 billion, are relatively safe from offshore penetration. However, the same cannot be said for the $7.21 billion product OEM sector, which is totally vulnerable *(see Chart 1 below, "North America Coatings Consuption 2010")*.

The three major sectors of the paint and coatings industry can be further broken down into 33 sub-segments. Of these, three industries influence the North American paint market most—Housing Starts and New Construction; Transportation; and Communications.

When housing starts shrink and transportation industry sales fall off, all of the coated products that go in them diminish as well. Chemark knows from our research that the business sectors with the largest capitalization tend to win. That is, when push-comes-to-shove it's the oil, chemical feedstock and big box retail companies that have more power than paint manufacturers. Paint makers are squeezed between cost and price pressures from all sides *(see Chart 2 on the next page, "Power Position in the Value Chain")*.

There exists an anomaly of power differences in the paint and coatings industry with regard to regional comparisons. In the architectural sector there is a great difference in profit pools between Western Europe and the U.S. In W. Europe the paint retailers and the paint manufacturers share

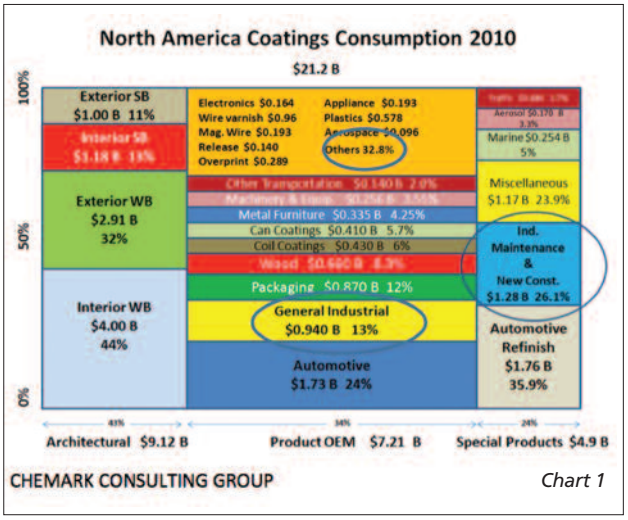


Chart 1

about the same portion in profits. Comparatively, in the U.S. retailers capture four times more of the profit pool than the paint manufacturers that supply the stores. Why? *(see Chart 3 below, "Economic Profit Pools in the Architectural Coatings Industry")*

Marketers are taught to capture as much of a defined market as possible because there are EOS (economies of scale) competitive advantages that will lower manufacturing, marketing and administrative costs. On paper these advantages should provide improved profits that can be reinvested to continue the cycle. Research shows that as an industry, paint and coatings do not capture value; therefore, the industry doesn't have the cash engine to reinvest in R&D, among other things. This phenomenon is captured in the model espoused by Harvard's Michael Porter *(see Chart 4 on the next page, "Coatings and Adhesives Margin Power Position")*.

According to "Porter's Profitability By Market Position" model, the ML should be both the volume and profit leader in an organized market. In this chart, it becomes apparent who is practicing value marketing and those who are not as so-called market leaders.

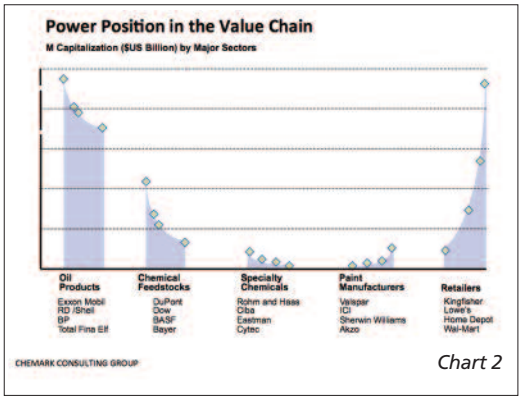


Chart 2

Powder coatings as a product line has suffered the greatest value loss, losing 70 percent of its value over the course of 35 years. To illustrate, consider the value movement of white appliance polyester, a specific application of generic powder coatings, from 1995 to 2010 when its value shrunk by 59 percent *(see Chart 5 on the next page)*.

To place this data into proper perspective and to stay even with the CPI, this same polyester powder coatings selling today at $1.28 per pound would have to sell at $5.50 per pound. A $3.90 per pound loss has taken place over 15 years. This represents a value loss three times the current selling price.

Why did powder coatings rise so fast within the metal substrate OEM Sector and fall equally fast in its value proposition? Simply speaking, it's the combination of these six elements at work:

1. Ease of market entry (low cost of capital at formulator level);
2. Booming economy (all boats float when tide is up/opposite when economic tide is low);
3. Too many formulators chasing too small market growth;
4. Excess capacity at the formulator level;
5. Little product differentiation (commodity problem); and
6. Price to fill capacity (with commodities, price is the lever).

Considering all types of coatings on a forced ranking approach, recent research shows that when price is excluded, the most important buying criteria among paint and coatings customers is product performance. This is followed by 12 other elements of decreasing value to the customer. Please note that the Sales Representative is last in importance at number 13. Why would that be the case? Why, since the representative is the face of the company, is it dead last? *(see "Paint and Coatings Customers' Buying Criteria" side box)*

The answer has to do with customer expectations. The customer, like all of us these days, wants instant gratification in product development; problem-solving technical service; customer service; and accurate and timely intelligence in its market. The sales representative is not giving these to the customer. *(see side bar "Paint and Coatings Customers' Buying Criteria").*

Paint and Coatings Customers' Buying Criteria

1. Product Performance
2. Value
3. Product quality consistency
4. Delivery on time
5. Technical service
6. Customer service
7. R&D capability
8. Trust
9. Company image
10. Marketing capability
11. Communications
12. Management capability
13. Sales representative

Source: Chemark Consulting

The customer is no longer interested in entertainment. Entertainment is acceptable only after the job is done. The customer needs to survive first and in order to survive customers constantly require solid intelligence. Unless the sales persons are technically skilled, combined with market/sales savvy plus a strong inquisitive energetic attitude, he or she and the company will suffer.

Present and future

The formulator "profit squeeze" provides an opportunity for raw material suppliers to offer "systems" and thereby gain greater control over their own destiny as well as the formulators' business.

Led by Rohm & Haas, the supplier base has finally decided it no longer can rely solely on the voice of the customer to

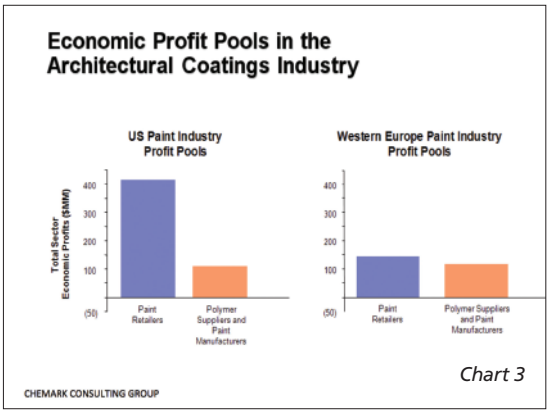
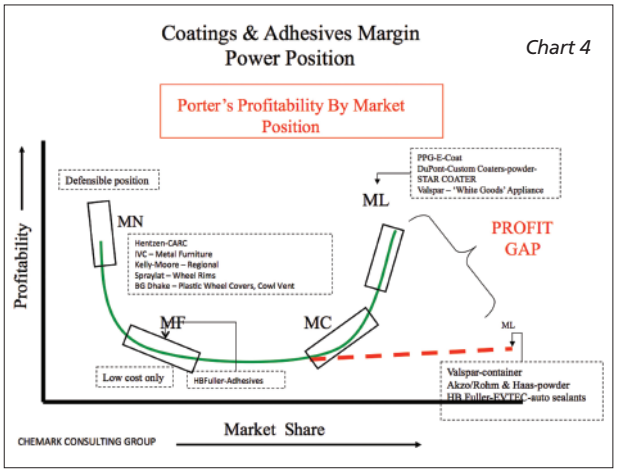


Chart 3



direct its' R&D since the formulators have unintentionally misled the suppliers because valuable intelligence gathering by the formulator at the end-user level has been inaccurate.

Suppliers are starting to move around their direct formulator customer and into the value chain downstream activities in an effort to improve the quality of product-building intelligence for purposes of developing more "first-time" resins, additives, etc. for the formulators themselves. This tactic is designed to help the formulator by augmenting the understanding of the formulator.

The problem with the supplier tactic of going around its formulator customer is territory jealousy. The formulator has always placed a barrier between its' customer (end-user) and its raw material suppliers' since one of the couple of core strengths the formulator is perceived to have is channel-to-market customer rapport. The wise formulator, however, will realize that the supplier must use whatever tactic makes sense to survive and thrive in a much more complex and competitive world and to "go around" him is going to take place whether or not he likes it.

1995	$2.75/lb
2005	$1.60/lb
Loss Value/vs. CPI	$1.15/lb (loss in value)
2010	$1.28/lb
Loss Value/vs. CPI	$1.47/lb (loss in value)

*A 59 percent value loss vs. liquid white systems of 32 percent loss in 15 years

CHEMARK CONSULTING GROUP Chart 5

Therefore, the formulator will do well to encourage a triangle relationship combining tactics that extract and compare intelligence gathered from any source with their own. This latter tactic is going to be of major importance in terms of increasing value throughout the supply chain.

For the foreseeable future, shifts in global power will continue unless something drastic occurs. Measures to curtail the easy access by offshore sources, namely China, into the U.S. could include prohibitive tariffs on hard goods, which is the course of action undertaken in Germany. Another option is for China's Yuan to be allowed to float, which will make their goods much more expensive, or we could enforce a complementary combination of the two occurs.

If we don't see a significant change in U.S. or Chinese policy the U.S. will continue to observe an erosion of OEM items to coat. In addition a major labor pool will be lost resulting in a reduction of the U.S. tax base, a smaller buyer base and lower GDP growth.

Research indicates that more than 80 percent of the laid off labor force in all industries in the U.S. shop at Walmart where more than 80 percent of its products are from China, which is one of the main reasons why we have laid-off workers in the first place. Where's Andy Rooney when we need him?

There are a lot of positive technologies making their way down the research and development pipeline. These include functional paints and coatings sourced from sustainable renewables. Examples are green biocides capable of continuously eating anything objectionable that would normally grow on painted surfaces; coatings that grow and replace themselves as environmental influences wear at painted surfaces; coatings that react to changes in UV intensities; "green" coatings that demaculate barnacle build on ships; and coating systems that digest grease and fingerprint fats.

The paint and coatings industry must use its new innovations as value levers for differentiation. However, concurrently it is important that the government is totally educated and importantly, onboard in a way that proactively helps the paint and coatings industry. **CW**