

2009 Global Plastic Additives Market Product Innovation of the Year Award

Milliken & Company

The 2009 Frost & Sullivan Product Innovation of the Year Award is presented to Milliken & Company (Milliken) in the global plastic additives market for creating novel products that can provide excellent performance. Milliken's products are enabling their end-users to address new requirements. Products such as the clarifiers and hyper nucleating agents enable growth in the polypropylene business by encouraging users to switch from other resins that are considered for their properties. Propylene resin makers are missing out on business opportunities in applications that required high levels of clarity and performance. Milliken is quick to respond to this area of the market by introducing high-quality clarifiers and modifiers to the plastics industry, targeting key industries such as packaging, automotive, construction, devices, and others.

Milliken successfully identified these changing trends and will continue to do so with a strong focus on technology. This Award is presented in acknowledgment of Milliken's significance within the plastic additives market. Milliken's full line of plastic additives, that includes clarifiers, colorants, nucleated agents, antimicrobials, and others, position it as a leading provider in the global plastic additives market with a commanding market share in many operating segments.

The Millad® and Hyperform® Series of Products: Excellence in Innovation

As a company, Milliken believes in continuous innovation. Even with its current products receiving widespread acceptance, Milliken is continually evaluating potential improvements to address customer needs. A key example of this trend is the case of the Millad® series which is continually improving, with the latest version introduced in 2008. This series of clarifiers, the chemistry of which is unique when compared to the commoditized sodium benzoate and talc products, focuses on improving the clarity of polypropylene in wide range of application such as blow molding, injection molding, bottles, clear sheets, and cups. Many plastic compounders and resin producers focus on their products ability to respond to new requirements because new requirements help them reach out to new customers, thereby helping them in growing their business.

While all clarifying agents are nucleating agents, it is not vice versa. Over the years, nucleating agents have been used with polypropylene to improve the physical properties, but less so for efficiencies and aesthetics. As a result, the market was devoid of a combination that can provide improved aesthetics, performance, and process economy. Milliken was quick to address this opportunity resulting in the introduction of its clarifier and nucleating products that exceed parameters such as performance and aesthetics for various polypropylene applications. The Hyperform® product line consists of hyper nucleating agents, which focus on overcoming process

challenges that affect the production costs of the resin as well as improving mechanical performance, dimensional performance, and aesthetics. It reduces the process cycle time, optimizes shrinkage, and reduces warpage to achieve cost savings. Warpage and cycle time optimization results vary but a 10-20% improve in productivity is common.

This innovation is significant since it tackles a challenge no other company was able to address, and more importantly, by the time any company attempts to introduce a similar product, Milliken would have an uncontended stronghold.

Products that Grow the Market: Benefits to the Industry

Propelled mainly by the identification of key growth areas and a solid understanding of industry needs, products developed by Milliken work to improve the businesses of its customers, solve application challenges, and render cost savings. While this is the focus of many companies, most are unsuccessful in their missions unlike Milliken, a company that has succeeded immensely.

While its cost-saving potential is mentioned above, some of the applications that have benefited from such products are in applications such as automotive, DVD packaging, thermoforming, house wares, material handling, food and meat packaging, baby bottles and sippy cups, mineral water bottles, and so on.

These products are propelling the growth of the polypropylene market worldwide. One example is the slow replacement of polycarbonate in baby bottles and sippy cups. Another key example is its use in thinner wall applications such as DVD packages.

In conclusion, Milliken helps grow the market for polypropylene in various packaging applications and is a strong contender to the conventionally used polystyrene, acrylics, and polycarbonate.

Global Success Stories

In one example, the use of Hyperform® was tested in the production of closures for bottles and other containers that used sodium benzoate initially. Results proved that the quality of the pigment level, aesthetics, and the cycle time are greatly improved. Results of that particular experiment also showed that the end plastic has 0 defects, whereas the customers experienced over 10 percent defective when using other products.

In another instance, a leading producer of manufacturing equipment for thermoformed packaging, observed a 23 percent increase in its productivity after using Hyperform® as well improved aesthetics and improved part ovality.

In yet another case, Danone, a worldwide leader in fresh dairy products based in France, was considering a cost-effective packaging material as an alternative to its glass packages for its cream cheese offering. By using Millad® series clarifiers, Danone's packaging resin maker, Braskem and transformer Huhtamaki, developed a

clear plastic cup made exclusively for such applications. Currently, Danone has replaced all of its glass packages it had been using for decades with this new plastic cup. The product was made of polypropylene. The weight of the packaging material was reduced by five times in addition to being an environmental-friendly resin.

Alpina, a food packaging power house in Columbia, South America, wished to produce a container for its new lemonade product, which could weigh and cost less than the conventionally used Polyethylene Terephthalate. Using Milliken's Millad® enables Alpina to cater to a larger segment due to lower costs in switching from PET to clarified polypropylene. Additionally, the clear package helped sell the product's natural lemonade appearance.

Home Concepts Products, a housewares company based in Los Angeles, CA, had an initiative to launch a clear, safe eco-progressive food storage container. Through collaboration between Milliken & Home Concepts, Millad® clarified polypropylene food storage containers were evaluated by consumers. The overwhelming response was the clarity of the Millad® clarified polypropylene containers equated to cleanliness, purity, and aesthetic appeal. In addition to the excellent aesthetics, the material offers enhanced sustainability creating a winning product.

Various other success stories of Milliken's products involved applications that include food trays in airlines, DVD cases, sippy cups, juice bottles, and so on.

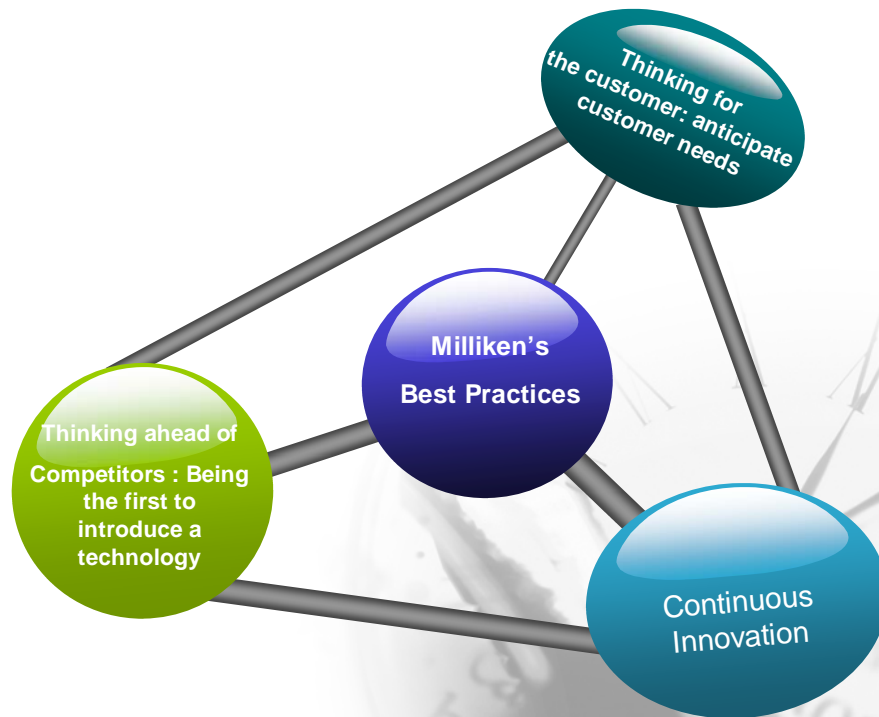
Motivated to Innovate

The clear motivation to come out with products such as Millad® and Hyperform® is to proactively pursue growth areas and segments, such as clarity, production costs, and others, that are not addressable due to the technical shortcomings of polypropylene. In a more simplified manner, the company's focuses on those areas where no other company is able to develop a product. Milliken's unique clarifying agents in the Millad® series are not based on the conventionally used chemistries, such as talc and sodium benzoate and its Hyperform® hyper_nucleating agents are one of a kind.

Milliken's products help polypropylene resin makers grow their business by increasing their addressable customer breadth. In addition, its products cause many end users to shift to polypropylene, thereby driving the market. The company is growing tremendously, capitalizing on its historical expertise in polypropylene additives. Milliken's continuous innovation and product improvements make them the preferred supplier among competitors. These developments have also benefited Milliken as it is showing growth rates of more than twice the polypropylene industry's growth rate.

Chart 3.1 presents Milliken's best practices in the global plastic additives market in 2009.

Plastic Additives Market : Milliken's Best Practices, (Global) 2009



Source: Frost & Sullivan

Conclusion

It is important for a company to be in line with market needs and challenges. Milliken not only meets the market needs and challenges but also creates new opportunities in the end market with the help of its customer-focused, future-oriented products. Usually, it is the market opportunities that drive the development of new products. However, in the interesting case of Milliken, it seems that the company and its products are driving the market by creating new opportunities. These aforementioned factors make Milliken the worthy recipient of the 2009 Frost & Sullivan Product Innovation of the Year Award in the global plastic additives market.

Award Description

The Frost & Sullivan Award for Product Innovation of the Year Award is presented each year to the company that has demonstrated excellence in new products and technologies within its industry. The recipient company has shown innovation by launching a broad line of emerging products and technologies.

Research Methodology

To choose a recipient of this Award, the analyst team tracks all new product launches, R&D spending, products in development, and new product features and modifications. This is accomplished through interviews with the market participants and extensive secondary and technology research. All new product launches and new products in development in each company are compared and evaluated based on degree of innovation and customer satisfaction. Companies are then ranked by number of new product launches and new products in development.

Measurement Criteria

In addition to the methodology described above, there are specific criteria used to determine final competitor rankings in this industry. The recipient of this Award has excelled based on one or more of the following criteria:

- Significance of new product(s) in its industry
- Competitive advantage of new product(s) in its industry
- Product innovation in terms of unique or revolutionary technology
- Product acceptance in the marketplace
- New products value-added services provided to customers
- Number of competitors with similar product(s)

About Best Practices

Frost & Sullivan Best Practices Awards recognize companies in a variety of regional and global markets for demonstrating outstanding achievement and superior performance in areas such as leadership, technological innovation, customer service, and strategic product development. Industry analysts compare market participants and measure performance through in-depth interviews, analysis, and extensive secondary research in order to identify best practices in the industry.

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