

**2008 Colorants & Masterbatches Green Excellence of the Year Award****PolyOne Corporation**

The 2008 Frost & Sullivan Green Excellence Award in Product Innovation in the global colorants and masterbatches market is presented to PolyOne Corporation (PolyOne). The company is an international provider of specialized polymer materials, services and solutions with its headquarters in Ohio and operations in North America, South America, Europe, and Asia. The award is presented in recognition of the company's capability to develop a range of unique and revolutionary products, such as OnColor™ BIO Colorants, OnCap™ BIO Additives and PlanetPak™ Packaging System introduced in 2007. These sustainable products deliver significant environmental benefits.

**Environment-conscious Business Commitment**

PolyOne has effectively focused on reducing environmental burden caused through its plant operations. The company has achieved this through a set of specific business policies and strategic guidelines.

➤ Environmental Management System

PolyOne implements its environmental principles through its Environmental Management System (a system which outlines PolyOne's environmental stewardship programs). The company's annual Environmental Forward-Planning Process forms an integral part of the Environmental Management System, whereby it evaluates possible environmental impacts of manufacturing facilities. This policy helps the company's manufacturing operations to proactively prioritize projects to meet or even exceed current and expected future environmental regulations. As a result, PolyOne can assess each project in terms of its potential impact on the environment and take the appropriate action to improve the plant's environmental performance.

➤ No Surprises Pledge<sup>SM</sup>

After the 2007 global toys scare regarding levels of lead and other harmful materials used in manufacture of toys, PolyOne initiated its No Surprises Pledge<sup>SM</sup>. The pledge assures its existing and future customers that materials used in production of its products conform to regulatory compliances on environment, quality and safety management, as required across the globe. The company was the first in the market to start such a program, helping to guarantee product viability and sustainability in the long run. This pledge has secured a strong brand for the company as a consistently safe, dependable and responsible supplier in the market, which differentiates it from its competitors. It is expected that a No Surprises Pledge<sup>SM</sup> might become a best practice or an industry standard in the near future.

## Comprehensive and Eco-friendly Product Portfolio Serving Wide Range of Industries

PolyOne is a premier global polymer services company, offering a wide range of colorant and additive concentrates, thermoplastic compounds (such as flame-retardant compounds, thermoplastic elastomer compounds and specialty compounds) and polymer distribution. In response to customer demand, PolyOne has developed a full palette of colors and an array of customized solutions to meet specific customer requirements in the biopolymer industry. It also serves as a one-stop shop of polymer solutions by providing a broad range of standard and customized masterbatch solutions, that can be used with biodegradable resins, such as, polylactic acid (PLA), polyhydroxybutyrate-valerate copolymer (PHBV), poly(butylene succinate) (PBS), poly(butylene adipate-co-terephthalate) (PBAT) and starch blends. Products can be tailored to meet global industry and composting regulatory standards, thereby ensuring maximum functionality with minimum impact on the environment. These 'green' products cater to various application areas such as consumer packaging, consumer products, toys, and transportation industries.

## Recent Innovative Product Launches

PolyOne has recently developed a collection of new color and additive concentrates in solid and liquid form, based on sustainable raw materials for the biopolymer market. These products not only help customers with processing, functional and aesthetic performance, but they can be tailored to meet global standards and requirements for compostable and biodegradable applications, while preserving the 'green' or 'environmentally safe' characteristic of the end products that employ them. PolyOne's technical expertise and strong research and development (R&D) efforts have enabled successive product launches thereby offering a broad choice of biopolymer color and additive concentrates for its customers. The company's responsiveness to customers' environment concerns is demonstrated through the following products based largely on sustainable raw materials.

### ➤ OnColor™ BIO Colorants

In 2007 PolyOne introduced its OnColor™ BIO Colorants (OnColor™ BIO- color concentrates and OnColor™ BIO L- liquid color concentrates), which are based on biopolymers such as modified starch compounds, biodegradable copolyesters, poly(hydroxy alkanooates) (PHA) and polylactic acid (PLA). The pigments used in these color concentrates comply with the compostable packaging standards (like EN 13432, ASTM D6400, BPS GREENPla and DIN CERTCO) and are available in a wide range of transparent and opaque colors for use in a broad range of plastics processing equipment.

In 2007, PolyOne's OnColor™ BIO Colorants were utilized by Green Toys Inc. to manufacture new, environment-friendly toys. As the OnColor™ BIO Colorants are based on sustainable raw materials, these innovative toys are expected to minimize its environmental impact.

➤ OnCap™ BIO Additives

In 2007 PolyOne launched its OnCap™ BIO, a range of additive concentrates specifically developed for the biopolymer market. The product line offers various process and application functionalities such as impact modification, de-nesting, anti-static, anti-block, ultraviolet (UV) protection, optical brightner and anti-fog. Under the OnCap™ BIO additive masterbatch range, PolyOne introduced new innovations such as OnCap™ BIO Anti-fog T and OnCap™ BIO Impact T, which improve the performance of transparent PLA sheet and film.

➤ OnCap™ BIO Anti-fog T

In 2008, PolyOne introduced OnCap™ BIO Anti-fog T, an anti-fog additive concentrate for biopolymers, which is purely based on renewable resources. It prevents fogging on the surface of food package, and hence prohibits loss of transparency and reduction of visual appearance of the contents inside. It also helps in maintaining freshness and quality of the food, thereby extending their shelf-life by preventing formation of small water droplets on the pre-packaged food items.

➤ OnCap™ BIO Impact T

OnCap™ BIO Impact T, a transparent impact modifier masterbatch for use in PLA, was also launched by PolyOne in 2008. This product is the only impact resistant modifier available in the market that has proven to enhance the impact resistance of PLA, while maintaining the polymer's desired transparency characteristic. PLA is based on renewable resources and is used in a wide range of applications in the packaging industry.

Both OnColor™ BIO Colorants and OnCap™ BIO Additives can be used in a variety of end-user applications including shopping and garbage bags, food and beverage packaging, agricultural mulch films, bottles and caps. In addition, PolyOne offers customized versions of both masterbatches in order to fulfill a customer's specific processing and end-use application requirements. The company also offers OnColor Smartbatch™, which is a combination of both OnColor™ BIO Colorants and OnCap™ BIO Additives in to a single masterbatch in order to better serve its customers according to their specific needs.

Additionally, PolyOne is responding to increased demands for renewable solutions by developing a series of experimental biopolymer-based custom compounds. These bio-compounds are suitable for use in the packaging and consumer goods industries and are designed to address some of the deficiencies found in the neat resin systems.

➤ PlanetPak™ Packaging System

In 2008, PolyOne introduced PlanetPak™ Packaging System for environment-friendly and efficient packaging, transport and storage of its color and additive concentrates. This solution provides sustainable and economic benefits over conventional steel-rimmed fiber drums. Recycling traditional fiber drums is a complex process due to the difficulty in separating the metal bands, rings and clasp from the fiber. Therefore, the fiber drums often end up in a landfill. On the other hand, PlanetPak™ Packaging System contains no metallic band or support and is manufactured from corrugated linerboard. Corrugated linerboard is generated from recycled materials and can be

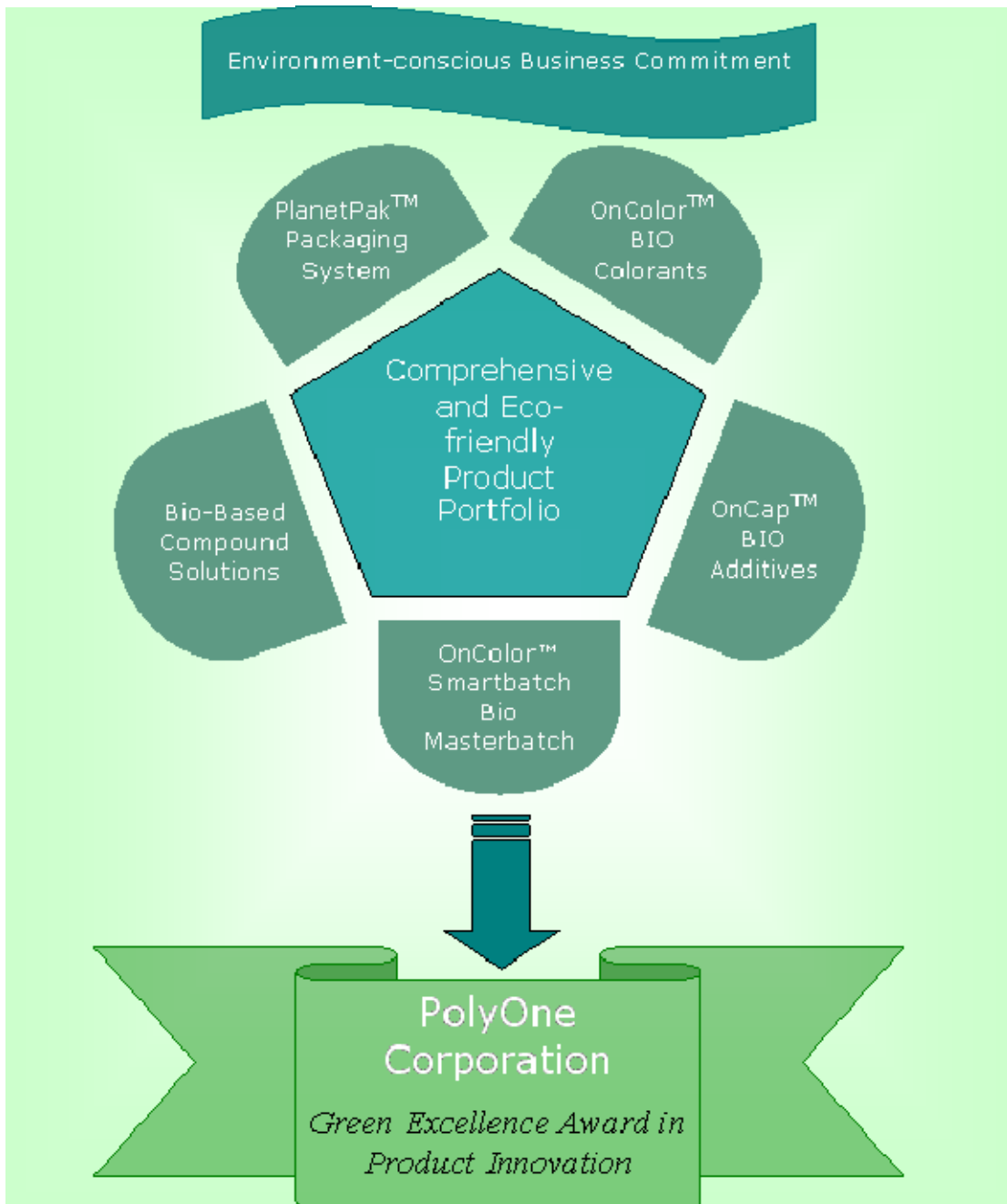
itself be reused. Through this system, the company ensures that its customers avail effective recyclable and sustainable solutions for their storage needs.

### Successful Industry Acceptance

PolyOne's bio products have already gained significant interest among its customers. Their environmental benefits ensure them a strong future prospect in global markets where product safety and environmental compliances are closely monitored. By virtue of its green initiatives in developing new, eco-friendly products and solutions for the biopolymer industry, the company's credibility and customer base have increased in the past one year.

Chart 1.1 presents the factors contributing to the Green Excellence Award in Product Innovation for PolyOne Corporation in the North American colorants and masterbatches market in 2008.

**Chart 1.1**  
**Colorants and Masterbatches Market: Factors Contributing to the Green Excellence Award in Product Innovation for PolyOne Corporation 2008**



Source: Frost & Sullivan

## Conclusion

PolyOne has emerged as a pioneer in the global colorants and masterbatches market by successfully launching several innovative and effective polymer products such as color and additive concentrates. The company has thereby successfully addressed changing customer requirements with respect to environmental issues. Its broad product range comprising of revolutionary, sustainable and eco-friendly products catering to a variety of application areas, have made the company the most reliable and preferred supplier in the market. Proactive business policies guaranteeing safe products that meet global environment standards and a strong principle to improve environmental performance of its production plants have enabled PolyOne to attain a credible position in the market. Its recent breakthrough product launches (such as OnColor™ BIO Colorants and OnCap™ BIO Additives) have helped PolyOne emerge as a leader in the market. By virtue of the products' superior environmental performance over other similar products available in the market, they have gained significant acceptance among their customers. All the above factors clearly indicate the competitive edge the company has exhibited over other participants in the market, thereby making PolyOne Corporation the worthy recipient of the 2008 Frost & Sullivan Award for Green Excellence in Product Innovation in the colorants and masterbatches market.

## Award Description

The Frost & Sullivan Green Excellence Award in Product Innovation is presented to a company that has demonstrated unique product design and development initiatives, which is aligned with a sustainable and environmentally conscious objective within its industry sector. This Award signifies the company's identification of a unique and revolutionary solution with significant environmental benefits, while presenting tremendous market potential simultaneously. Moreover, the Award also signifies that the company's overall business strategy is sound and poised for success.

## Research Methodology

Product innovation, focused on environmental priorities and long-term sustainability, is assessed regularly through continuous monitoring amongst market participants within specific industry sectors. Frost & Sullivan's analyst teams perform extensive interviews with companies within specific industries to evaluate their products, technologies and business strategies. In addition, research within that market space is performed to benchmark the Award recipient's product line against others. Also considered are elements such as strategic alliances, expected time to market, environmental soundness, long-term green strategies, and management advocacy behind the success of the product.

## Measurement Criteria

Specific measurement criteria used to determine the final award recipient are as follows:

### Product Profile

- Product platform characterized by long-term sustainability
- Streamlined design that enhances product efficiency
- Adaptability and responsiveness of the product to address changing environmental needs and priorities

### Business Commitment

- Entrepreneurial dexterity in incorporating conservation into the business concept
- Development of product solutions to address concerns regarding climate change
- Industry's acknowledgement of the green initiative in question, by way of financial support, strategic support, and recognition as a pioneering venture

### Environmental Accountability

- Demonstration of obligatory responsibility in reducing environmental burden as part of the solution (e.g. cradle to grave solution)
- Inherent features that enhances adoption / participation rate
- Creation of collective accountability towards reducing the impact of climate change, dependency on finite resources and ecological footprint

## About Frost & Sullivan Green Excellence Awards

Instituted as an integral part of the Environment & Building Technologies Practice of Frost & Sullivan, Green Excellence Awards are presented to companies that have excelled in green product and technology innovation, and service achievements. These Awards recognize groundbreaking ideation and innovation across a multitude of disciplines that originated from a firm sense of environmental responsibility. Recipient companies are committed to a continuous focus on reducing the dependency on finite resources, from concept to commercialization. Their efforts demonstrate a resolve to reduce the impact of climate change and overall ecological footprint.

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.

## About Frost & Sullivan

Frost & Sullivan, the Growth Consulting Company, partners with clients to accelerate their growth. The company's Growth Partnership Services, Growth Consulting and Career Best Practices empower clients to create a growth focused culture that generates, evaluates and implements effective growth strategies. Frost & Sullivan employs over 45 years of experience in partnering with Global 1000 companies, emerging businesses and the investment community from more than 30 offices on six continents. For more information about Frost & Sullivan's Growth Partnerships, visit <http://www.frost.com>.

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