

Sussex IM, Sustainability, and You

INTRODUCTION

Sussex IM works in partnership with customers holistically to improve efficiencies – in product design, material selection, and manufacturing processes – to build brands, enhance corporate citizenship, and reduce environmental impact.

This white paper will focus on key areas such as:

SUSTAINABILITY: What do we mean by “sustainability”? How do we at Sussex IM work with customers, in partnership, to solve the toughest problems and create customer solutions?

THE CHALLENGES: What confusion is there about newer materials? What are the legislative issues, such as Prop 65? What are the challenges to OEMs and brand owners? How do consumer perceptions vary by age? By region?

THE OPPORTUNITIES: How can we work together to select the materials, meet legislative challenges, and proactively create advanced plastic solutions?

SUSTAINABILITY REALITY CHECK: What are the hard truths about sustainability and “greenwashing”? What does the future hold? How can we work in partnership to create innovative, environmentally positive plastics solutions that close the supply loop and are in congruence with today’s business imperatives?

SUSSEX IM AND SUSTAINABILITY

What is Sustainability? According to the 1987 Brundtland Commission, UN General Assembly, “Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” Back in the 1980s, the concern centered upon disposal and end-of-life issues. Today, there is much more of a cradle-to-cradle approach.

Here at Sussex IM, sustainability informs all aspects of our world. We consider sustainability an ethical and moral obligation. This is a companywide commitment across all functions.

Sustainable production enhances supply chain efficiency. It anticipates the expectations of our customers and their end-users. It keeps our solutions competitive far into the future and, therefore, spells marketplace success for all.

The Sussex IM sustainability approach has many facets. Our centrally-located and fully integrated facilities are designed to keep transportation and production costs down. Our talented workforce diligently crafts the innovative products that reduce our impact on the planet and deliver the utmost in quality. Our ingenious automation designs reduce energy consumption and speeds the time to market. Sussex IM invests heavily in the most energy-efficient machinery and optimized industrial processes available today.

The Sussex IM environmental policy is set by top management and reflected in all that we do, as evidenced by a host of certifications from the world's most stringent agencies. Robust Key Performance Indicators (KPIs) ensure eco-efficiency. This benefits both the planet and the bottom-line.

Sussex IM solves problems that satisfy consumer needs. That is our corporate credo. In order to make this possible, we pledge -- to our people, our community, our suppliers and partners, and our customers -- the diligent innovation of business practices -- across functions -- that respect environmental impact and help shape our future.

Further, we pledge to:

- **Provide needed input and guidance to our customers to allow them to make their own fact-based environmental decisions and commitments;**
- **Meet all aspects of federal and local pollution prevention laws, requirements and environmental regulations that govern our work;**
- **Identify sources of pollution and endeavor to eliminate or reduce their impact.**

CHALLENGES

Organizations face a variety of challenges as they strive to create and implement a focused sustainability effort. First, there is a variety of materials to choose from. There are legislative issues to consider. There are brand-specific considerations. And there is confusion around consumer and end-user perceptions between generations, and from one geographical region to another.

For example, younger consumers, and those on both coasts, sometimes seem to be far more eco-conscious than their older counterparts, including those in the American heartland. A common consumer perception is that packaging waste is greater than it actually is. There are those who believe that "all packaging is garbage." For others, discarding packaging brings up feelings of material and functional loss, as well as guilt. Actions and perceptions among brand owners reveal optimistic goals regarding sustainability efforts.

A major multinational beauty products brand(1) recently published these goals for sustainable development:

- **Promote and provision of refills and reduce CO2 and waste**
- **Replace 100% of the resin currently being used for containers and packaging to sustainable plastic by 2030**
- **Switch 100% of the paper used for our products to recycled paper, non-wood paper or (third-party) certified paper by 2023**

This same company promotes a holistic approach to sustainability, which includes initiatives in formulations (e.g. formulas that use less water), dealing with suppliers (e.g. locally-sourced components), manufacturing (e.g. alternative energy sourcing), in the workplace (e.g. in-office recycling), and packaging. In the latter, the company lists use of bio resins, PCR resins, light-weighting, and more.

Such goals are admirable and altruistic. The key, in our experience, is to weigh all options and discuss them fully with customers, in order to devise the best outcomes for each particular brand.

Here at Sussex IM, a major part of our charter is to identify and source the right materials and manufacturing technology on behalf of our customers. Taking a one-size-fits-all approach can backfire.

With Post Consumer Resin, for example, there are considerations related to cost, quality, and supply chain reliability. There are manufacturing factors to consider as well.

According to Toly Management Ltd., PCR materials are those that have already been on the market, then collected and re-manufactured. PCR consumes, on average, 50 percent less resources to produce, Toly states. The company adds that its PCR materials, available in PET, ABS and PP, is "cost neutral or better."

Bio Resins appeal to some product makers; the biodegradable story can be attractive. However, certain conditions must exist for these materials to break down in landfills. Polylactic Acid (PLA) has been around for more than a century(2). These are resins derived from non-oil based monomers (such as corn, sugarcane or wood pulp). And there are other bio-based options, made of natural binders and FSC certified wood.

Hybrid products, such as PETs containing 30% PCR(3), promise great clarity. There are even packages now being made from plastic collected from ocean waste.

These all hold promise but are not – in every instance – compatible with beauty industry products – and they may require special recycle streams that are not always in place.

Today's marketplace is confusing for product manufacturers, suppliers, retailers -- and end- users as well. Awareness of eco-friendly material options and packaging alternatives, is higher today, as is the amount of related misinformation and info-overload.

In addition to California's Prop 65 and the EU CEP, both referenced below, there is a growing number of environmental standards from ISO and a number of commercial environmental certification offerings:

PROPOSITION 65: The Safe Drinking Water and Toxic Enforcement Act, known as Proposition 65, is a California law passed in 1986(4). It requires product warnings of a lengthy list of chemical substances. Further, Prop 65 is a "bounty" system – that is, anyone who knows a chemical is present can report it to OEHHA (Office of Environmental Health Hazard Assessment), leaving the violator to prove that the chemicals used are not above the risk levels.

EU CEP, Circular Economy Packaging Directive(5): The CEP directive on packaging and packaging waste went into effect in 2018 and is mandatory for the following: EU countries, UK (as of this writing), Turkey, Russia, Japan, Canada, and a number of others. Each country has an EPR, Extended Producer Responsibility, initiative to assess a fee on companies for the recycling of

their products packaging. "Modulated" packaging fees are in place in France, Germany, Italy, Netherlands, and Sweden. Currently, numerous other countries are assessing implementing EPR fees and more are adopting the EU CEP directive. At this time the U.S. has no published active legislative programs, but likely will be developed over time.

ISO 14001(6) is the international standard that specifies requirements for an effective environmental management system (EMS). It provides a framework that an organization can follow, rather than establishing environmental performance requirements. All of our factories are ISO14001 certified.

ECOVDIS(6) is a Corporate Social Responsibility (CSR) assessment of a company's material CSR impact, based on documented evidence.

SEDEX(6): The Supplier Ethical Data Exchange (Sedex) is a not-for-profit membership organization committed to the continuous improvement of ethical performance within their supply chains. The Sedex Self-Assessment Questionnaire (SAQ) allows the sharing of information about ethical practices with multiple customers.

CDP(6): The Carbon Disclosure Project is an organization based in the United Kingdom which supports companies and cities to disclose the environmental impact of major corporations. CDP is concerned exclusively with global warming.

This outline of the complex and evolving regulatory landscape gives one a sense of how material selection and product labeling have become increasingly demanding and vital functions.

OPPORTUNITIES

Our holistic approach to sustainability – from product design to material selection, to manufacturing processes – enables our customers to benefit, in terms of their business success, improved environmental impact, and enhanced corporate citizenship, which is a key aid to brand building.

One of the most ubiquitous commodities in the world is plastic packaging, and finding ways to reduce dependence on petroleum-based resins is big business in a world where green awareness is taking center stage.

Here at Sussex IM, our eyes and ears are always open to winds of change, enabling us to help our OEM customers and brand owners in their push to a sustainable future, whether in terms of legislation or material selection.

Opportunities abound through intelligent selection of materials but to re-state, it's important to steer clear of one-size-fits-all solutions. Here is a brief summary of the pros and cons for just one material now under consideration in certain applications – PCR:

- **PCR stands for Post-Consumer Recycled.** Plastic that has already gone through a first consumer use which is then recycled is considered Post-Consumer Recycled (PCR) material. This is different from 100% recycled plastic, Post-Industrial Recycled material, which may only be recycled scrap plastic that has not yet gone through consumer use.

- **Eco-friendly and innovative, PCR is available in various resins and can be added in a wide variety of packaging options.**

- As mentioned above, consumer education about environmental processes behind their product packaging has increased. Positive perceptions around such products enhances engagement, as such newer materials are in congruence with their personal values and new eco-friendly sustainable usage habits. Such PCR packaging can resonate with eco-conscious consumers, reduces the carbon footprint and helps the drive to higher sustainability targets.

- **Customization:** PCR can be customized as would designs of virgin plastic packaging, in terms of colors, finishes and decoration.

There are many other new options in materials that are worthy of consideration, depending on the application. Such decisions, however, require rigorous analysis to determine true cradle- to-cradle sustainability benefits, as well as impact on total all-in costs and end-user satisfaction.

The SussexIM team continues to lead in the use of Bio Resins. Bio Resin is sustainable and renewable, the principal component being vegetable oils. Research shows that the substitution of 1 ton of conventional resin derived from petrochemicals with 1 ton of bioresin has the potential to yield a net reduction of up to 7 tons of CO2 in the environment (Source: Cambridge Biopolymers Ltd, UK.) Our customers have come to rely on our significant experience in the plastics packaging industry to guide them through today's complex marketplace environment. In some instances, we have advised customers that Bio Resin is not always the optimal choice.

This is where Sussex IM expertise delivers value-added. Working in partnership with our customers, Sussex IM helps navigate legislative issues and identify the optimal materials and processes for a particular application, given the drive to a sustainable future. It is not easy. Together, we forge a path to take advantage of unique industry opportunities.

CONCLUSIONS: SUSTAINABILITY REALITY CHECK

The drive to cradle-to-cradle sustainability is necessary and admirable. Ideally, such efforts should be holistic, organization-wide, and designed for the long-term integration into the Circular Economy model. OEMs and brand owners that work with experienced suppliers can truly make a difference, as they plot the complete material, energy, and process flow from raw materials to end of life.

It's not easy. It requires a constant reality check, to determine the optimal path forward. Today's marketplace can be confusing, for product manufacturers, suppliers, retailers, and end-users as well. Awareness of eco-friendly material options and packaging alternatives are heightened, as is the amount of misinformation and info-overload. The marketplace is in transition, and that's the hard truth. Each analysis must be rigorous if an optimal custom solution can be developed.

The conclusion? We are located near our customers, and our skilled workforce delivers superior products that compete well against offshore competitors, when all cost factors are considered.

Our customers have come to rely on our significant experience in the plastics packaging industry – from pellet to pallet – to guide them through today's complex marketplace environment and on the road to a sustainable future.

Sources:

1. Shiseido
2. Toly
3. Toly
4. Assent Compliance
5. Council of Europe
6. Toly