Emmbi's PPWR & Sustainability Initiatives

Objectives and reasons for development of recycled polymer based bulk packaging

When one thinks of packaging, they often directly imagine large piles of waste and garbage. And this is true – they are the first things to be disposed of and are usually just a means to an end. Yet this purpose is indispensable, as they protect products and enable their transport.

At the same time, the production of packaging is a significant economic sector in the EU. However, the varying concepts and regulations in the member states, especially in terms of labeling, recyclability, and reusability, create obstacles to the smooth functioning of the internal market. These discrepancies create legal uncertainties, which in turn hinder investments in innovative and environmentally friendly packaging solutions.

Additionally, packaging represents a central environmental problem. They consume large amounts of primary raw materials – 40% of the plastics and 50% of the paper used in the EU are for packaging. The increasing use of packaging has not only led to a rise in CO2 emissions in recent years but has also made recycling more difficult.

Especially when they cannot be collected separately due to their design. Between 2012 and 2020, the proportion of non-recyclable packaging has significantly increased, and many countries are struggling to meet the recycling targets set out in Article 6 of Directive 94/62/EC. This situation emphasizes the urgent need for an EU-wide packaging regulation that not only strengthens the economy but also serves environmental protection.

Reduction in environmental impacts/carbon reduction/reduction in emissions

- Energy Efficiency: Adoption of energy-efficient technologies, including 250 KWA of solar power (10% of total energy requirement), to reduce overall energy consumption.
- Recycled Materials: Use of up to 50% recycled polypropylene in FIBC production through the Reclaim Technology, reducing the need for virgin materials and lowering carbon footprint.
- Waste Reduction: Implementation of an internal recycling system, diverting industrial and consumer waste from landfills, which reduces emissions associated with waste disposal.

- Eco-Friendly Products: Production of Eco-Safe FIBCs, designed for easier recycling, promoting circularity and reducing the environmental impact of discarded products.
- Sustainable Packaging: Focus on reducing landfill waste by creating recyclable packaging, contributing to a reduction in overall carbon emissions.

Reduction in Waste Materials through Prevention, Reduction, Recycling, and Reuse at Emmbi

Emmbi is committed to sustainability and responsible resource management through its internal waste recycling system, which aims to reduce the environmental impact of its operations.

- Inputs:
    - Industrial Waste Generated in Silvassa: We source waste materials produced by local industries in Silvassa, ensuring that valuable resources are diverted from landfills and instead repurposed for further use within our processes.
    - Consumer Waste Generated in Silvassa: Emmbi works with nonprofits that actively collect consumer waste, to recycle and repurpose these materials into raw materials for our production cycle.
    - Waste Generated at Intermediary Steps in Emmbi Factories: Waste produced during various stages of manufacturing within Emmbi's facilities is carefully collected, sorted, and processed to minimize its impact. This waste is either reused internally or recycled to produce secondary raw materials for new production lines.
- Strategies for Waste Reduction:
    - Prevention: We focus on designing products and processes that minimize waste generation right from the start. This includes optimizing material inputs - for example, through our automatic sustainable dozing-mixing units.
    - Reduction: We work to reduce the volume of waste created at every stage, from raw material sourcing to product output. This is done through continuous process improvements and the adoption of cleaner technologies.
    - Recycling: Waste materials are segregated and processed to recover valuable components that can be reused. We have invested in advanced recycling technologies to ensure that materials like plastics are effectively recycled into new usable forms.
    - Reuse: By fostering a culture of reuse, we aim to reduce the demand for virgin materials. By reprocessing scrap materials, we give them a new life within our own manufacturing system, reducing the need for external raw materials and further contributing to waste reduction.

How we deliver sustainability

At Emmbi, we are deeply committed to providing eco-friendly, high-performance products that support a circular economy and reduce environmental impact. Here are some key ways we are making a difference:

- Emmbi EcoSafe – A Bag Designed for Recyclability
  - The Emmbi EcoSafe FIBC (Flexible Intermediate Bulk Container) is a groundbreaking innovation in sustainable packaging. What sets this bag apart is its homopolymer design — all parts of the bag are made from HDPE (High-Density Polyethylene), a material that is 100% recyclable.
  - Traditional FIBC bags are often constructed using multiple polymers, which complicates the recycling process. By using a single material, the EcoSafe FIBC is much easier to recycle, eliminating the need for complex sorting. This makes it highly efficient for both consumers and recyclers, contributing to:
    - Simplified Recycling: The homopolymer design allows the entire bag to be processed in a single recycling cycle, reducing energy and time spent on sorting and separation.
    - We minimize the potential for bags ending up in landfills, thus helping divert waste from the waste stream. **At present time, key point will be ESRS E1: Climate Change.** The European Union expects from every European Company to submit a full carbon account of its activities and products. Vercom sells products, which have been produced and supplied by other companies, including yours. This means we will be obliged to demand this data from you.
    -

- Emmbi Reclaim – Sustainable Materials Through Advanced Recycling
  - Emmbis Reclaim Technology takes sustainability even further by integrating recycled polypropylene into the production of FIBCs. Through ReClaim, we incorporate 30%, 40%, and 50% recycled polypropylene into the fabric of our FIBCs, making it a more sustainable choice for customers and reducing reliance on new, virgin materials.
  - Key benefits of Emmbi ReClaim include:
    - Reduction of Plastic Waste: By reusing polypropylene from post-consumer or post-industrial waste, we help divert plastic from landfills and reduce the demand for new raw materials.
    - Lower Carbon Footprint: The use of recycled polypropylene reduces energy consumption and greenhouse gas emissions compared to manufacturing products from virgin plastic.

- Eco-Friendly Packaging Solutions: Customers who choose Emmbi ReClaim can significantly reduce their environmental footprint by opting for packaging that contains a high percentage of recycled materials, contributing to the circular economy.

Any sustainable practices in operation

Yes, Emmbi implements several sustainable practices in its operations, including:

- Waste Reduction and Recycling: Emmbi has an internal recycling system that minimizes waste generated at all stages of production and repurposes industrial and consumer waste, through a dedicated recycling unit called Vasundhara.
- Energy Efficiency: We adopt energy-efficient technologies to reduce power consumption and minimize our carbon footprint including the use of 250 KWA of solar power, which is around 10% of our total energy requirement.
- Use of Recycled Materials in Products: Through our ReClaim Technology, we incorporate up to 50% recycled polypropylene into our FIBCs, reducing reliance on virgin materials and promoting circularity, without compromising on affordability or strength.

How we deliver social value within our business and also in the wider community

- Recycling and Waste Management
  - Internal Recycling Plant: We operate an internal recycling facility to process waste generated at various stages of production, ensuring materials are reused or recycled to minimize environmental impact.
  - Collaboration with Nonprofits: Emmbi partners with organizations like 5RCycle to enhance waste management efforts and promote recycling in the community.
  - Educational Initiatives: We engage with local schools and colleges in Silvassa to raise awareness about the importance of recycling and sustainable practices, empowering the next generation to be environmentally conscious.
- Women in Manufacturing
  - Progressive Policies: Emmbi is committed to creating an inclusive and supportive work environment. Our policies include menstrual leave and special provisions for women workers, promoting better workplace health and well-being.
  - Health and Wellness Programs: We conduct regular health camps to address common issues like anemia, which is prevalent among blue-collar workers in India. These initiatives help ensure the well-being of our workforce and improve productivity.

- Agricultural Products
    - Jalanschay: Emmbi's innovative product Jalasanchay has helped over 50,000 farmers across India conserve billions of liters of water. This water storage solution is crucial in drought-prone areas, contributing to sustainable agricultural practices and improving water availability for farming communities.

Sourcing materials from ethical and traceable sources

Emmbi ensures that its materials are sourced from ethical and traceable sources by partnering with suppliers who adhere to strict sustainability and ethical standards. The company prioritizes transparency in its supply chain, conducting regular audits to verify that materials are sourced responsibly. Emmbi also works closely with its suppliers to ensure that they follow fair labor practices (in accordance with Indian law), environmental protection guidelines, and traceability protocols (in particular, for recycled material). This commitment to responsible sourcing helps Emmbi create products that align with both ethical values and high-quality standards.