Foam PS Recycling Works at MRFs

Spotlight: EDCO Disposal

WHY RECYCLING FOAM PS WORKS

— Lemon Grove, CA

A success story often has a simple beginning. This one starts with EDCO Disposal's desire to recycle as much material as possible. In 2010, EDCO decided to expand their recycling program and began collecting and processing polystyrene at their Lemon Grove, California material recovery facility (MRF).

Clean, source separated polystyrene is collected from commercial accounts. Packaging, cushion, and food service foam polystyrene foam (Foam PS) is also collected from residential customers in their single-stream curbside recycling program.

EDCO, and the cities they serve, include on their respective websites information about the types of polystyrene accepted and how the material should be prepared for recycling.

Residents participating in the recycling program have given positive feedback: they are very happy to have the opportunity to recycle polystyrene foam along with all of the other recyclable materials collected in their community—

Curbside Recycling Foam PS Best Practices

Like all recyclables, MRFs want the Foam PS to be clean. Ask residents to wipe or rinse free of food, liquids, etc. prior to recycling.

Steps for a successful and profitable MRF operation:

- Remove Foam PS in the pre-sort area.
- Install chutes on the sorting line to feed a temporary storage area next to the grinder.
- Use a large capacity grinder for swift processing: this reduces labor time and costs. Grinding can be labor-intensive so it is important to maximize efficiency.
- Use an air delivery system to blow ground foam through tubes to a large canvas storage hopper attached to the top of a densifier (avoid melting material as this uses significant energy and emits undesirable odors).
- To reduce labor costs, incorporate a switch that automatically activates the densifier when the hopper is full.
- Purchase a densifier that requires minimal labor and with lower throughput than the grinder. This reduces equipment costs and machine operations should be largely labor-free.
- Allocate sufficient storage space for densified and palletized Foam PS to ensure the ability to generate full truckloads.
- Cover palletized material that is stored outside to prevent moisture and photodegradation.

"EDCO is committed to recycling. Through the use of a densifier we are able to process and divert polystyrene from the waste stream. We will continue to work with our residential and commercial customers to ensure they understand that polystyrene is a product that can and should be recycled"

– Bob Hill, Director of Recycling, EDCO Disposal, Inc., Lemon Grove, CA

Densified Foam PS ready for shipping

How They Do It!

— A big part of an effective recycling program is getting material from point A to point B efficiently and profitably. EDCO's polystyrene recycling program does just that using a well thought-out process. **The secret ingredient is densification!**

The Foam PS collected curbside from EDCO's residential customers begins its recycling journey on a truck headed to a MRF in Lemon Grove, California.

Upon arrival, the truck dumps the single-stream curbside material onto the MRF floor where it is moved onto a conveyor belt for sorting. At the front end of the conveyor, MRF sorting staff pull-off and drop the Foam PS down into a storage bunker.

From there the material is periodically transferred to a powerful grinder where the source separated Foam PS collected from commercial accounts is added into the grinding operation.

The ground Foam PS is transferred by a blower to a large canvas hopper where it stays until there is enough to be densified.

When the hopper is full the ground Foam PS is delivered to a densifier and compressed—to a ratio of 40 to 1—into long rectangular blocks. The blocks are stacked onto pallets.

Ultimately, a full truckload quantity, **40,000 pounds of polystyrene, is shipped to a buyer that will make it into new recycled content products.** —

FOAM PS RECYCLING RESOURCES:

- **www.PlasticFoodserviceFacts.com**
  Facts, news, public policy issues and recycling resources on Foam PS foodservice products.
  American Chemistry Council, Plastic Foodservice Packaging Group
- **www.RecycleFoam.org**
  Information on Foam PS recycling process, equipment and system manufacturers.
  Foodservice Packaging Institute, Foam Recycling Coalition
- **www.HomeForFoam.com**
  Information for government, homes, businesses, and schools on how and where to recycle Foam PS.
  DART Container Corp.
- **www.EPSpackaging.org**
  Recycling tools and resources for original equipment manufacturers. Offers an Foam PS Sustainability Toolkit.
  EPS Industry Alliance Packaging
- **www.EPSrecycling.org**
  Thirty-one countries connected via Global Recycling Access network.
  International EPS Alliance: Asia, Europe, and North America
- **www.FoamFacts.com**
  Foam PS recycling facts, links to articles and videos.
  DART Container Corp.
- **www.Plastics.Ca**
  Canadian focused information, articles, news, program highlights, markets, videos.
  Canadian Plastics Industry Assoc.
- **www.PlasticsRecycling.org**
  Recycling information, webinars and videos.
  Association of Postconsumer Plastic Recyclers