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Recycling, materials separation major theme of CCMA event

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ATLANTA (Oct. 4, 10:40 a.m. ET) — In its search for sustainability, the plastics industry has moved beyond lightweighting packaging into more aggressive use of post-consumer materials. But according to experts up and down the supply chain, there's still too much confusion at all levels about how to separate valuable packaging materials from caps and closures after their initial use.

"The technology doesn't exist at a rate that would be affordable for any of us to separate [poly]ethylene from [poly]propylene — from the reprocessor down to the [materials recovery facilities] to the people who are doing the curbside collecting," Stephanie Baker said Sept. 12 at the Closure and Container Manufacturers Association's annual meeting in Atlanta.



Stephanie Baker of KW Plastics, left, and John Delfausse of Estée Lauder (Plastics News photos by Leland Holder)

The Barrington, Ill.-based industry group collocated its meeting with Plastics News Global Group's Caps & Closures 2011 conference.

Baker, director of market development for the recycling division of KW Plastics in Troy, Ala., said in 2010, the firm purchased 80 million pounds of scrap PP, of which 70 percent came from caps and closures.

KW, which has four wash lines for high density PE and PP, views reclaimed PP as the next boom in post-consumer plastics.

"The missing link is the [curbside] collector, and they are so confused — they have no idea what they are supposed to collect," Baker said.

One of KW's partners, Aveda Corp. of Blaine, Minn., has pitched in to help by asking buyers of its personal care products to return caps and containers to hair salons and getting children to bring used Aveda caps to schools.

John Delfausse, vice president of global packaging development for Estée Lauder — Aveda's parent company — said since 2005, more than 1,600 schools have enrolled in Aveda's cap collection program.

In September 2008, Aveda reused the caps in a 30th anniversary package for its clove shampoo, which combined TricorBraun molded bottles made from 96 percent post-consumer HDPE with 100 percent recycled PP caps, with the resins supplied by KW.

"This is not a profit-maker. We sell the [collected materials] to KW, but the UPS [Inc. shipping] costs way outweigh the revenue we're bringing back," Delfausse said.

Despite the cost, the caps drive has collected 80 million caps, a whopping 721,000 pounds of plastic, Delfausse said.

David Andison, president and chief operating officer of Bericap North America Inc. in Burlington, Ontario,



Bericap's David Andison

agreed that one of the biggest problems made in recycling is misinformation. Most consumers still do not know that — in many communities — it's OK to leave their PP or HDPE caps on empty water, carbonated drink or juice bottles or laundry detergent containers when they toss them into the curbside collection bin.

“We've tried to work with municipalities and brand owners and those who can influence consumer behavior [to express that] recycling caps is the appropriate thing to do; the caps need to go with the PET through the recycling stream. Every recycler has a sink-float tank; they will get the mixed olefin stream; they can sell that,” he said.

In his company's case, the bigger hurdle is that Bericap North America, a joint venture between Germany's Bericap GmbH & Co. KG and Australia's Amcor Ltd., needs food-grade HDPE and PP, so caps potentially containing more than one material present a problem. Virgin resin remains the material of choice.

Several presenters and attendees at the CCMA meeting discussed the need for the plastics industry to work more closely with the Washington-based Association of Postconsumer Plastic Recyclers and the Sonoma, Calif.-based National Association of PET Container Recyclers. The groups, they said, need to improve consumer education about including caps and closures in recycling and ensure that design guidelines become industry standards. For example, APR recommends that PP and PET bottles have PP caps and that HDPE bottles have HDPE caps.

“Amcor is about two steps removed from the consumer in terms of recycling, so the [consumer education] work done by [companies] like Coca-Cola and Aveda is far more effective at that end. We try to do most of our work through industry groups like NAPCOR or APR to facilitate that,” said David Clark, director of sustainability at Amcor Rigid Plastics, Amcor's North American packaging subsidiary in Ann Arbor, Mich.

Clark, who joined the molder as manager of its PET recycling plant, said it behooves industry to be involved in the recycling stream as an active player. He pointed to the recent decision by major Canadian grocers to require that clamshell food containers be thermoformed from recyclable PET, as well as the Society of the Plastics Industry Inc.'s \$100,000 grant to increase recycling of thermoformed products in the U.S., as evidence that the movement toward post-consumer recycled material is growing.

Extended producer responsibility plans — in which producers, usually brand owners, are held responsible for the costs of managing their products at the end of life — are under consideration in some states, and already in place in Canada and Europe. Plastics companies need to be aware of the complexity of the situation, he said.

Already, paint and electronics manufacturers in North America are funding recycling drives, giving them more control as opposed to government-mandated plans, he said.

“Keeping waste out of landfills is a very 1970s response to environmentalism. The issues we have today in terms of material resources, energy savings, reducing carbon footprint — all of those types of things benefit from recycling.

“In addition to that, when consumers can put [used packaging] in the recycling bin they feel good about it; when they have to throw it in the trash because it's not recyclable, it's not their fault — it's ours,” Clark said.

The good news for the plastics industry is that the U.S. marketplace for reclaimed material continues to grow, especially at a regional level.

In the Southeast, more than 6,000 people are employed in manufacturing that is dependent upon recycled plastic for feedstock, said Will Sagar, the Brevard, N.C.-based policy director for Southeast Recycling Development Council Inc.

Working in 60 separate facilities across the region, these businesses contribute \$3 billion annually in added

value to the U.S. economy, he said.

A recent research project conducted by the College of Charleston in South Carolina evaluated what the impact would be if 1,000 tons of reclaimed plastics were returned to the Southeast annually.

“Georgia alone could create nearly 2,500 jobs, with over \$5 million in tax [revenue], if the material going into its landfills was reclaimed,” Sagar said.

Over 1,440 million pounds of post-consumer PET and 981 million pounds of post-consumer HDPE were recycled in 2009, he said. If U.S PET recycling capacity increases to the expected 1.8 billion pounds, from 1.2 billion at the beginning of the year, the old concept of digging into landfills for lost plastic could become as viable as reclaiming metals (although that process is as simple as passing an industrial magnet over a trash pile).

“Our resources are no longer coming from the forests or the mines; now, they’re coming from the ‘urban mine,’” Sagar said.

However, the problem of mixed materials continues to bedevil processors. Clark said that RPET has become darker than that seen five years ago, due to contamination in the recycling stream by other plastics and associated chemicals. Paper manufacturers have had to deal with plastic in their recycling bales, and everyone is finding shards of glass in their materials.

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