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September 30, 2019

Ministry of Environment and Climate Change Strategy
Recycling Regulation Amendments
PO Box 9341 Stn Prov Govt
Victoria, BC V8W 9M1
plastics@gov.bc.ca

Re: British Columbia Plastics Action Plan Stakeholder Submission

The Association of Home Appliance Manufacturers (AHAM) is thankful for the opportunity to provide feedback on the proposed amendments to the recycling regulations of the Environmental Management Act. Our submission is attached. It is only through open consultation and dialogue that we can achieve our mutually shared environmental goals while at the same time ensuring that people obtain undamaged products, worker safety is addressed, and businesses in Canada can continue to thrive and help grow the economy.

AHAM represents manufacturers of major, portable, floor care home appliances and suppliers to the industry. AHAM's membership includes over 150 companies throughout the world. In Canada, AHAM members employ tens of thousands of people and produce more than 95% of the household appliances shipped for sale. The factory shipment value of these products is more than \$5 billion annually.

The home appliance industry has a history of transitioning to the use of materials that lessen their environmental footprint in both their everyday use and management at their end of life. This includes the use of more environmentally friendly refrigerant gases and recyclable materials in both appliances and appliance packaging, as well as significant advancements in energy efficiency. Home appliance manufacturers are taking the lead to protect the environment and are moving forward with phasing out high-GWP HFC gases as refrigerants and foam blowing agents for household refrigerators/freezers.

Please do not hesitate to contact me should you have any questions about the content of this submission.

Sincerely,

Meagan Hatch
Director of Government Relations
Association of Home Appliance Manufacturers

1: Bans on Single-Use Plastic Packaging

AHAM is pleased that the government will allow certain exemptions as the province moves forward in phasing out single-use plastic. The appliance industry is committed to reducing packaging waste while ensuring products arrive to customers undamaged. Worker safety during transportation and at distribution centers must also be considered. At the end of the day, we want to make sure that any bans on single-use plastic does not result in increased product damaged and ultimately more waste. Further, manufacturers of durable goods often operate in supply chains where packaging is designed to protect products during storage, transport, and delivery. The consumer rarely sees the packaging involved and in these instances, manufacturers have a cost incentive to reduce packaging to the fullest extent feasible in order to minimize packaging and transportation costs, which also means fewer freight miles that contribute to greenhouse gas emissions.

Any potential bans on plastic packaging must consider if the packaging material is essential to the proper delivery or functioning of the consumer product and if there are any cost effective alternatives that will work in all climates and in all circumstances, such as a product being delivered to a home, to a brick & mortar retailer or through e-commerce.

Worker safety and health

Worker safety during transportation and at distribution centers must be considered especially when dealing with large appliances such as refrigerators, freezers, dishwashers, cooking ranges, washers and dryers. After being assembled, major appliances are often packaged and stored and moved in very large warehouses or distribution centers. These facilities often have limited climate control and can experience extreme temperature and humidity changes and packages are often tested from (-29°C to 63°C). Low temperatures can cause packaging materials to become brittle while humidity and heat can affect the packaging's structural integrity and limit the effectiveness of adhesives or the strength of products that are made from fiber. The structural strength of packaging is necessary to maintain for safety purposes, particularly with respect to major appliances that are housed in stacks that are three or four appliances high. Furthermore, these appliances are often moved around by clamp truck and the packaging must withstand the force of the clamps in order to be moved efficiently.

There are also cases where single-use plastic is used to safeguard consumer health. For example, carbon filters that are used to remove contaminants and impurities in drinking water must be wrapped in a plastic airtight package or else they will lose their filtration properties while in storage. No alternative to this packaging currently exists.

Warehouse Stacking and Clamp Truck



Need for Structurally Sound Packaging

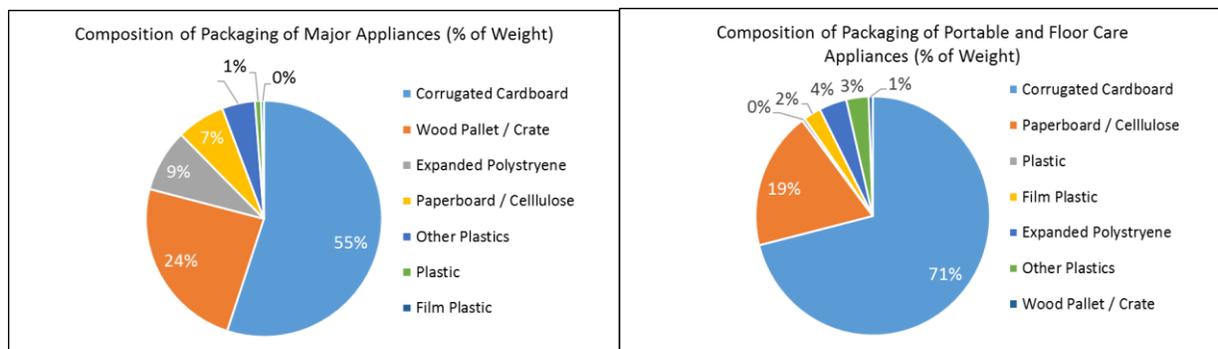


Appliance packaging is made up of recyclable materials

Appliance packaging is comprised mostly of paper and wood, materials that are highly recyclable. A small amount of plastic packaging is commonly used around the exterior of the appliance to protect, preserve, store and transport products. A small amount of polystyrene is also used around the edge of a large appliance to protect it during transport because it is lightweight, will bounce back after an impact and will maintain its integrity in humid conditions. Other paper alternatives such as cardboard, molded pulp or honeycomb can only handle a single impact and loses its integrity in hot and humid environments. Critically important also is protective films on stainless steel appliances to protect them from scratches during manufacturing and delivery.

A study done on appliance recycling by Burns and McDonnell dismantled packaged appliances and analyzed their material composition.¹ This study found the following results for major appliance packaging:

- 55% was corrugated cardboard
- 24% was wood pallets / crates
- 9% was expanded polystyrene
- 7% was paperboard / cellulose
- 6% was other plastics



Avoid breakage during transport

The packaging must also maintain its integrity for the final transport by truck so that it can be delivered safely to the home. Our member companies vigorously test the packaging in laboratory settings using comprehensive test methods such as drop, compression and vibration tests to ensure that the products arrive to the customer's home or to the store undamaged.

Manufacturers of consumer products also need flexibility in choosing appropriate materials for packaging their products to avoid situations that cause product breakage and damage during transport. An example

¹ Burns & McDonnell Engineering Company, Inc., *Analysis of Appliance Recycling in the U.S. and Canada*, July 2017

of this is the use of plastic film to protect stainless steel surfaces. There is no paper-based product that could serve this function because paper is abrasive and it scratches the surface, leading to damage and returns. There are currently no viable alternatives available for this purpose.

Packaging for small appliances is also a challenge because of the requirements that brick and mortar retail are often different from those of e-commerce, and yet the packaging must often satisfy both streams. In both instances, extended polystyrene (EPS) often improves the consumer experience. Consumers generally prefer to have minimal assembly required, and the shock absorbing properties of and ability to mold EPS improves the ability for the product to be assembled before packaging and shipped in as close to a fully assembled state as possible.

E-commerce packages are designed for seventeen or more touchpoints or drops and products sold in traditional retail often experience five touchpoints or drops. EPS is often a preferred packaging material because of its light weight and resilience to multiple shocks or collisions during transportation, which paper-based materials lack. In other cases, pulp serves the technical needs that EPS fills, but it increases the volume and possibly the weight of the packaging, leading to additional GHG emissions during transportation and delivery.

Packaging also plays a different role in smaller products, sometimes as a requirement by the retailer. In brick and mortar settings, the packaging communicates directly to the consumer and the packaging may have to serve that function while also being resilient enough to withstand the stresses of e-commerce. Furthermore, retailers can impose packaging requirements on manufacturers to reduce theft. This is becoming an increasing concern in e-commerce as well, as packages without a non-descript outer box can be a target for theft.

AHAM members have looked into alternative, non-plastic or non-EPS materials to replace those that are in current use. Common barriers that these materials face include technical limitations, limited availability, and cost.

2: Dramatically reduce single-use plastic in landfills and waterways

Landfills

The global recycling environment has changed considerably as China stopped accepting recyclable plastics from Canada, and therefore, the provinces and municipalities are struggling to figure out a way to deal with the waste. The degree of recycling in Canada is further impacted by the availability of recycling infrastructure for collecting, sorting, processing plastics domestically. Canada's recycling infrastructure needs to be significantly improved and expanded in order to deal with increased volumes of all types of plastics and to manage hard to recycle plastics. Any proposed regulation must address this problem. Without significant investments in recycling infrastructure most of the plastic that is collected under any new programs will unfortunately just end up in landfill.

Waterways

The issue of microfiber pollution is getting increased attention by the public, media, researchers and politicians. At this point, it is not clear what the actual source of these fibers is. Any effort to curb microfiber pollution will have to consider sound scientific evidence, accurate and factually based information and consider consumer awareness and education campaigns. For example, any evaluation of shedding of microfibers during laundering must look to the apparel industry and consider the entirety of the textile and apparel supply chain, which includes the extrusion of fibers, manufacturing of yarn, cutting and sewing of fabrics, apparel production, and end of life.

Aftermarket washing machine filters may claim to trap microfibers, but consideration of the cost of these filters should occur. Also, testing should be done on their effectiveness in realistic conditions with detergents or fabric softeners. In fact, several aftermarket filter manufacturers have stated on their websites that if consumers use detergents and fabric softeners in their filters on their washing machines, it is likely to clog the filters. This can lead to frequent cleaning and excess water consumption by the consumer. When consumers clean the filters in a sink, the microfibers will end up in the waste water stream anyway.

Additionally, detergents and softeners could trap organic materials in the filter causing bad smelling and harmful bacteria. This could lead to antimicrobials being used to prevent odors or unsanitary conditions. There is also a lack of industry technical standards and test procedures related to performance of microfiber filtration that could lead to issues with product or property damage if filters malfunction, clog, or are not tended to frequently by the consumer. Counterfeit products could also enter the marketplace.

Finally, consumer feedback has also shown that a filter needing frequent maintenance is not a desirable feature and consumer's general proclivity not to maintain appliances (lint traps in dryers) would negate any theoretical impact filters would have on microfiber polluting the waterways. Filters in washing machines for microfibers are neither practical nor impactful for the task at hand.

Recommendations

- 1) That the provincial government earmark funds to modernize and expand plastic recycling infrastructure across the province so that various and more challenging plastics can be more effectively recycled. Achieving a 90% diversion target in 2030 requires investment for additional capacity across all recovery options.
- 2) Any potential bans on plastic packaging must consider if the packaging material is essential to the proper delivery or functioning of the consumer product and if there are any alternatives that will work in all climates and in all circumstances, such as a product being delivered to a home, to a brick & mortar retailer or through e-commerce. Worker safety during transportation and at distribution centers must be considered.
- 3) Any proposed policy about microfibers during laundering must first determine the cause and pathway to waterways. This issue should be addressed at the municipal water treatment level and textile manufacturing level, not targeting laundry systems (the middle phase).