RECYCLE PLASTIC BOTTLES WITH CAPS ON

FREQUENTLY ASKED QUESTIONS

The Association of Postconsumer Plastic Recyclers (APR) asks that caps and closures be kept on plastic bottles and containers at the point of recycling. This will come as a change for many communities. Below are some of the commonly asked questions about caps-on recycling.

BUT I’VE ALWAYS HEARD THAT THE PLASTIC RECYCLERS NEEDED CAPS TO BE TAKEN OFF?

Until recently the plastics recycling industry was not able to effectively recycle bottles with caps on so the message to remove the cap was created. But recycling collection and processing technology has improved and demand for the recyclable material has increased and this allows for the updated caps-on recycling message and process. This important development is expected to be permanent.

WHY MAKE THE CHANGE?

Two key reasons: First, when recycling gets easier, participation goes up. APR is dedicated to boosting participation in recycling programs. Second, the cap material is recyclable. Why dispose something that could be recycled? The cap back on reduces odor and other issues with keeping bottles in homes until collection day for the less-than-pristine used food bottles.

ARE RECYCLED CAPS MARKETABLE?

Yes. Generally, caps are made out of high density polyethylene (HDPE) and polypropylene (PP) – both of these have high demand from applications in both domestic and export markets.

WHO IS IN CHARGE OF UNSCREWING ALL THOSE CAPS DURING THE RECYCLING PROCESS?

No one. Bottles are ground into flake before being vigorously washed in the recycling process. The washed cap material is then separated from the bottle material during a water bath float/sink process. The PET bottle material will sink; the PP cap material will float. Both materials are then recycled into new items.
BUT I THOUGHT CAPS WERE MADE OF A DIFFERENT TYPE OF PLASTIC AND HAD TO BE RECYCLED SEPARATELY.

Frequently the closure is made of a different material than the bottle. But one of the early steps in the recycling process is to grind the bottle into small flakes. Then the different types of material can be separated. For instance, for PET containers, the caps and bottles are different materials very intentionally. The float/sink process that takes place in the reclaimer separates the material so they can be recycled independently of the other.

CAN BALES OF BOTTLES WITH CAPS ON BE MARKETED AT THE SAME RATE AS BALES WITHOUT CAPS?

Yes. APR’s model bale specifications do not downgrade for the inclusion of caps. APR member companies regularly buy and recycle bales of caps-on containers.

CAN I GET A GOOD BALE COMPACTION RATE WITH CAPS ON BOTTLES?

Good bale density is important – too light and it’s hard to hit load requirements. Too tight and the material is over compacted. While the answer varies by the type of baler, generally speaking 100-120psi of pressure should allow most balers to compress plastic bottles with caps on. Large-scale 2 ram systems should have no trouble as they often range in the 150-300+ psi range. A single ram, closed door baler usually operates at 70-120 psi. While larger balers of this format should be fine, those running at the low end of that range will generally have trouble securing a good bale. A single ram extrusion auto tie also needs to operate more at 100-120psi range but there’s some finesse needed. By running a load of cardboard before the bottles, the operator then gains something hard to push against and should be able to reach compaction.

MUST THE BOTTLES GO THROUGH A PERFORATOR MACHINE BEFORE BALING IN ORDER TO GET GOOD COMPACTION RATES?

Generally, no. Most current Material Recovery Facilities (MRF) do not operate a perforation machine to puncture the bottles before baling. Heavy duty horizontal balers take care of the job using plenty of pressure. For those MRF’s and others who use low pressure vertical balers, the correct strategy is to either continue to have the caps removed or to perforate.

WILL THE CAPS SHOOT OFF DURING BALING?

APR strongly suggests all baler safety equipment such as guards be left untampered, unmodified, and unchanged to prevent incidents and accidents. Rupturing polyethylene (PET) bottles in a baler can create projectiles and baler manufacturers have included the guards for worker protection.
ARE THERE THINGS I CAN DO TO DESIGN MY PRODUCTS TO MAKE THEM MORE RECYCLABLE?

The new and improved APR Design® Guide for Plastics Recyclability is the most comprehensive and user-friendly resource outlining the plastics recycling industry’s recommendations in the marketplace today. The content has been updated to present a more easily accessed, clearer picture of APR’s Recyclability Categories representing today’s North American plastics recycling infrastructure.

ARE METAL CAPS REALLY A PROBLEM?

Yes, they can be. Steel caps damage machinery and aluminum caps slow down production and are too contaminated to recycle.

IS THIS THE SAME AS RECYCLING TUBS AND LIDS?

Close, but not quite. Recycling tubs (yogurt, margarine, etc) and lids (large, flat, snap on) is a relatively new target for municipal recycling, and they are currently in the learning process. The key is the same as for any recycling, namely what does the market want. Visit http://www.plasticsrecycling.org/markets/model-bale-specs to access the APR Model Bale Specifications for Rigid Plastics.

MY MRF SAYS THAT THEY DO NOT ACCEPT CAPS ON PLASTIC CONTAINERS. WHAT SHOULD I DO?

Please let them know that APR has announced a call for caps and closures to remain on containers at the time of recycling. Please feel free to share this information or direct your MRF officials to: www.plasticsrecycling.org. We understand that for some MRF’s accepting caps on is readily done and for some it is a challenge. Our message is that the market accepts bales for which the caps are left on the bottles.

MY COMMUNITY SAYS THEY ARE NOT YET READY TO ACCEPT CAPS ON PLASTIC CONTAINERS.

APR anticipates that this process will take time. While the marketing of bales of plastics including caps and closures is an accepted practice, the equipment and policies at the local level may take time to adapt. Please feel free to share this information or direct your community officials to: www.plasticsrecycling.org.

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The Association of Plastic Recyclers (APR) is the “Voice of Plastics Recycling.” As the international trade association representing the plastics recycling industry, membership includes independent recycling companies of all sizes, processing numerous resins, as well as consumer product companies, equipment manufacturers, testing laboratories, organizations, and others committed to the success of plastics recycling. APR advocates the recycling of all plastics. Visit www.PlasticsRecycling for more information.