WHICH PLASTIC MATERIAL IS BEST FOR CANNABIS PRODUCT PACKAGING?

The common choices for cannabis packaging include PET, Polypropylene (PP), and HDPE.

PET is the material of choice for stretch blow molded containers. PET offers glass like clarity, excellent oxygen and moisture barriers and IS THE SUSTAINABLE CHOICE for recycling due to its prevalence in the waste stream. Water, soda and most food containers use PET due to its superior barrier qualities. PET containers can be made from FDA grade Post Consumer Recycled Material (PCR), commonly mixed at a 25% ratio with virgin material. PET molds are comparatively expensive.

PP is the material of choice for injection molded containers like Pop Tops, Push and Turn Vials, Calyx Vials and PP jars. PP is cloudy in appearance in its natural state, offers a poor oxygen barrier, and is NOT commonly recycled. PP is inexpensive to produce. PP containers typically have a slight taper to aid in removing from the mold.

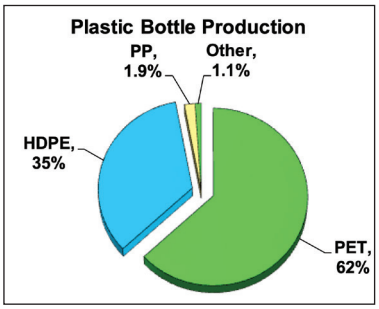
HDPE is the material of choice for large blow molded containers. HDPE is cloudy in appearance in its natural state and offers a poor oxygen barrier. HDPE is commonly used for milk jugs and as such is prevalent in the waste stream. HDPE containers can be produced with PCR. HDPE can also be produced from renewable sources such as sugar cane.

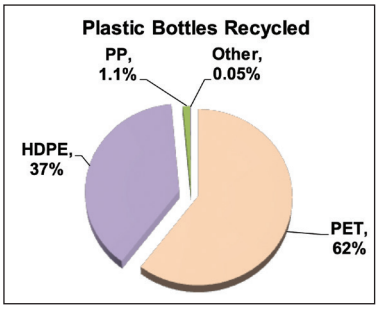
	PET	PP	HDPE	LDPE	PS (Styrene)
Clarity	Excellent	Poor	Poor	Poor	Excellent
O^2	75	3,500	4,000	9,500	5,000
CO^2	540	7,000	18,000	42,000	16,700
Flexural Modulus x 103	Poor	Poor	Good	Excellent	Poor
Impact Strengt	Good	Fair	Good	Good	Poor
Maximum Hot Fill (F°)	120°	200°	190°	150°	150°
Minimum Tolerance (Brittleness) C°	-40°	0°	-100°	-100°	18°
Density g/cc	1.36	0.91	0.96	0.92	1.05

SUSTAINABILITY

PET (62%) and HDPE bottles (37%) together represent 99% of all plastic bottles recycled

2017 Plastic Bottles Recycled and Plastic Bottle Production by Resin





Source: More Recycling, 2017. NAPCOR, 2017

PP (1%) is often co-mingled with HDPE when recycled due to its failure to have enough material in the waste stream to reach "critical mass".

The total pounds recycled material processed:

- PET: 1.6 Billion lbs
- HDPE: 953 million lbs
- PP: 29 million lbs

Source: https://plastics.americanchemistry.com/Reports-and-Publications/National-Post-Consumer-Plastics-Bottle-Recycling-Report.pdf

eBottles420.com | Phone: 561-203-2779 | Fax: 561-203-2797