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Mini Review

Side Nack Drinking Water Pet Plastic Bottle

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Abstract

India has the world's largest population that has limited access to clean drinking water. So the new drinking water plastic bottle design will help to the consumer to Easy to drink, Easy to fill, Lighter Packaging, Designing for Recycling, Consumers Attracted to Portable, Easy to Handle Packaging, Health-Conscious Decisions, Attractive design.

Keywords: Side Nack; Plastic Bottle

Introduction

Plastic Bottles Today— Innovating to Reach Today's Consumer Plastic bottles have specific manufacturing and performance advantages over other packaging materials like aluminum, steel and glass that have helped plastics expand their market share of packaging materials. But with the growth of plastic bottling there is a heightened awareness of end-of-life (EOL) issues regarding their recycling and disposal. The plastics industry—and the entire value chain— has responded with sustainability efforts and educational endeavors. Yet plastics litter—whether a recycled bale or a bottle floating on a waterway—is a visible and galvanizing image that demonstrate the extremes of how plastics are managed after they are used. Without question, plastic bottles have come a long way since their first commercial uses in the late 1940's. The introduction of high-density polyethylene (HDPE) and polyethylene terephthalate (PET) polymers expanded plastic bottling applications. Plastics then surpassed glass as the go-to packaging choice for a wide array of products and brands. The importance of plastic bottles to PLASTICS' membership—and the overall stakeholders like consumers, brands, policymakers and NGOs—is unquestioned. Bottling ranks high in PLASTICS' data on the plastics industry's output with only packaging film and sheet/plastics (except packaging) being higher in terms of employment numbers, value of industrial shipments and capital expenditures.

Role of plastics in bottling

Plastics in Everyday Containers Plastic bottles and jars represent approximately 75 percent of all plastic containers, by weight. While PET and high-density polyethylene (HDPE) represent approximately 86 percent of the plastic container market and are able to serve the bottling needs of most products on the market today, other types of plastics—including bioplastics and recycled plastics—are used for a wide range of bottling and packaging needs in a variety of industries, and are recyclable:

PETE Polyethylene Terephthalate (PET, PETE, PETG or polyester) is commonly used for carbonated beverages, water bottles and many food products like peanut butter and jelly jars, and cooking oils. PET provides strong impact resistance and tensile strength. PETG, one form of PET, offers greater design freedoms than stan-

dard PETE, such as the ability to add handles to orange juice jugs. PET packaging has excellent barrier properties and also offers crystal clear transparency so consumers can see the product.

HDPE High Density Polyethylene (HDPE) is used for kitchen, bath and laundry bottles, as well as other consumer goods. HDPE is economical and impact resistant, and provides a good moisture barrier. HDPE is compatible with a wide range of products including acids and caustics but is not compatible with solvents. It can be used for bottle caps, milk jugs, grocery bags, shampoo bottles, yogurt tubs, detergent bottles, hard hats, Plastics in Everyday Containers Plastic bottles and jars represent approximately 75 percent of all plastic containers, by weight. While PET and high-density polyethylene (HDPE) represent approximately 86 percent of the plastic container market and are able to serve the bottling needs of most products on the market today, other types of plastics—including bioplastics and recycled plastics—are used for a wide range of bottling and packaging needs in a variety of industries, and are recyclable: Role of Plastics in Bottling backpack frames, hula hoops, etc. HDPE is naturally translucent and flexible. The addition of color will make HDPE opaque, but not glossy.

V Polyvinyl Chloride (PVC) is naturally clear plastic that is extremely resistant to oils and chemicals and most often used in the toiletry and cosmetic market. It provides an excellent barrier to most gases and its drop impact resistance is also very good.

LDPE Low Density Polyethylene (LDPE) is similar to HDPE in composition, but is less rigid and less chemically resistant than HDPE. LDPE is used primarily for squeeze bottles (ketchup/mustard) as well as food storage containers, film/ shrink wrap, and bags (produce, grocery, trash, dry cleaning and bread). LDPE is a versatile and impactresistant and reusable plastic that is generally more expensive than HDPE. Despite specific initiatives to increase recycling, its recycling rate is less that PET and HDPE.

PP Polypropylene (PP) is used primarily for jars, medicine bottles and closures, and provides a rigid package with excellent moisture barrier. PP is durable and versatile.

PS Polystyrene (PS) offers excellent clarity and stiffness—glass-like quality—at an economical cost. It is commonly used with dry products including vitamins, petroleum jellies and spices.

Other Resins, like polycarbonate (PC), are in plastics bottles. PC is a clear plastics used to make stiff, reusable personal water bottles. PC is recycled with a variety of plastic resins not identified by codes [1-10].

New design plastic bottle

- Easy to drink
- Easy to fill
- Lighter Packaging
- Designing for Recycling
- Consumers Attracted to Portable, Easy to Handle Packaging
- Health-Conscious Decisions
- Attractive design

Figure 1

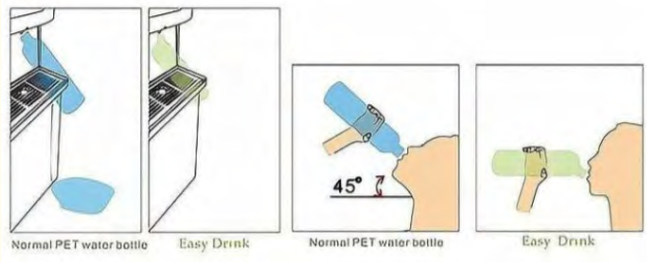

Figure 2

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