

acrylic. A general chemical term of thermoplastic materials, such as Lucite and plexiglas, made by polymerization of monomeric esters of acrylic acids.

aerosol. A term used in packaging to describe all containers which consist of (1) a gastight container, (2) a valve, (3) a desired product. (4) a self-contained propellant which forces the product from the container when the valve is opened. True aerosols are suspensions or dispersions of fine particles in a gas. The original aerosol packages were insecticide sprays developed by the U.S. Department of Agriculture in 1943 (U.S. Pat. 2,231,023) in which at least 80% of the discharged particles are less than 30 microns in diameter. Products dispensed from aerosol packages include true aerosols, "wet" sprays (coarse particles), foams, pastes, syrups and powders.

aerosol container. A container equipped with a dispensing valve, the construction and design of both being strong enough to retain the compressed or liquefied gas that acts as the propelling agent for the discharge of the contents through the valve. Aerosol containers are of two general types: (1) Reusable, which must be designed to meet DOT regulations with respect to size and ability to withstand pressures; (2) Single-use, the regulations covering which are much less stringent than for the reusable aerosol container. Aerosol containers may be made from any material which will withstand required internal pressure: metal, glass, plastic.

barrier. A discrete layer or ply of material designed to separate contiguous materials and to limit the migration or infiltration of undesirable elements into a package and to prevent the loss of desirable elements from the package.

blister packaging. A type of packaging where the item is secured between a preformed (usually transparent plastic) dome or "bubble" and a paperboard surface or "carrier." Attachment may be by stapling, heat-sealing, gluing, etc.

bloom. (1) The result of exudation of an ingredient from a product as visibly evidenced on the product or transparent package, as sugar bloom on candies, oil deposit on film wrapper, etc. (2) (verb) To undergo process resulting in bloom. (3) A surface film on glass or other packaging materials resulting from attack by the atmosphere or from the deposition of smoke or other vapor. (4) Blooming of salts in Type III glass. Blooming of stearates on rubber parenteral closures.

blow molding. Forming bottles and packages from plastic by expanding a blank in a hollow mold. The blank is ordinarily a tube, formed on the machine that accomplishes the blow molding. The parison is extruded in extrusion blow molding, or injected in injection blow molding, using granular resin as raw material.

Boston round. A line of glass containers (used by drug and chemical industries^{â€™} customers) characterized by round cylindrical shape with a short curved shoulder.

bottle. As used in packaging, a container having a round neck of relatively smaller diameter than the body and an opening capable of holding a closure for retention of the contents. The cross section of the bottle may be round, oval, square, oblong, or a combination of these. Generally made of glass, but also of polyethylene or other plastics, earthenware, metal, etc.

bottle dropper. A bottle with a closure containing a pipette dropper as an integral part thereof. The pipette dropper may or may not be equipped with a rubber bulb. If equipped with rubber bulb, the bulb may be an integral part of the closures.

bottle, glass. Generally, any glass container capable of holding a closure (not including ampuls which are sealable by fusion of the opening, or shell vials). Includes a large variety of glass containers of various sizes, shapes and finishes, such as: jar, demijohn, carboy, flask, flagon, magnum, etc. (3) Specifically, a narrow-neck container as compared with a jar, or wide-mouth container.

bottle, plastic. A bottle made from a thermoplastic polymer, usually by blow molding or injection molding process.

bottle, squeeze. A plastic bottle, usually made of polyethylene, which is sufficiently flexible that, by the pressure of gentle manipulation, it will dispense its contents as a spray, stream, droplets, or a viscous mass.

cap. (1) A cover type of closure which fits over a container neck or opening rather than into it. (See PLUG) A cap may have internal threads to engage the external threads of the container, or may be held by friction, air pressure, etc., against the external parts of the opening. (See CAP, SCREW; CAP, LUG; FRICTION CAP; CROWN; VACUUM SEAL).

cap, child resistant. A closure which is compliant with Code of Federal Regulations Title 16, Part 1700.

collapsible tube. A cylindrical container of thin, flexible metal, made of tin, tin-lead alloy, lead or aluminum, with integral shoulder and neck, provided with an appropriate size opening and with a closure, usually a screw cap made of plastic. Collapsible tubes are also made of other materials such as paper, films, plastics, etc. They may have wax, resin or lacquer linings. Collapsible tubes are usually filled through the bottom and subsequently closed by multiple folding of the bottom, or crimped with a metal clip or sometimes welded tight.

continuous thread. Use in referring to the helical threaded neck finish of containers or to closures designed for application to these finishes. C-T denotes continuity of thread in order to differentiate it from the lug, I-T, or other form of interrupted-thread forms. These C-T finishes have the GPI finish designations in the 400 series.

cork finish. A finish (bottle opening) which is closed by means of a cork.

dropper cap. Metal or molded plastic cap closure with a glass or plastic dropper and small rubber or plastic bulb attached.

extrusion. A method of shaping material by forcing it, with the application of heat and pressure, through an aperture of the desired shape. (1) Plastic extrusion: The production of continuous length of sheeting, film, rods, tubing, filaments, etc., by forcing thermoplastic materials through heating zones, thence through a die of the desired shape, followed by immediate cooling to retain the shape imparted by the die. Such extrusion may be made directly into a liquid, as is done in the manufacture of cellophane. (2) Impact extrusion: A process in which a die is charged with a pellet

or disc of metal or other malleable material and forced by impact to conform to the shape of the die. Examples: collapsible tube bodies, some high pressure gas cylinders, etc.

finish, glass. That portion of the neck of a glass or plastic container which carries the threads, lugs or friction members to which the closure is applied, and includes the sealing surface and sealing bead; generally, the whole portion above the transfer or pry-off bead. (The term finish in connection with glass containers is a holdover from earlier days before glass blowing became an automatic, mechanized operation. The neck of a container was the last part to be formed, hence the name finish. Thus, finishes are really neck finishes, and are made in many standardized types, styles, and dimensions.) The type of finish to be specified depends on the type of closure to be used. A list of generic finishes is available from GPI.

flash. Excess of molding material which runs out of the cut-off when mold is closed.

Glassine. A supercalendered, smooth, dense, transparent or semitransparent paper manufactured primarily from chemical wood pulps, which have been beaten to secure a high degree of hydration of the stock. This paper is grease resistant, and has a high resistance to the passage of air and many essential oil vapors used as food flavoring and, when waxed, lacquered, or laminated, is practically impervious to the transmission of moisture vapor. It is made in white and various colors; opaque glassines are produced by the addition of fillers.

heat seal. A method of uniting two or more surfaces by fusion, either of the coatings or of the base materials, under controlled conditions of temperature, pressure and time (dwell).

injection molding. A method of molding thermoplastic materials wherein molten plastic resin is extruded and injected between two mold halves where pressure and cooling solidify the plastic.

jug. A bottle, usually of half-gallon or larger capacity, fitted with a handle. Made of earthenware, glass, etc.

Kilogram (kilo). A unit of weight in the metric system equivalent to 2.2046 lb.

label panel. A flat place on a glass, plastic or other rigid container where a label may be glued.

label, shrink. A printed label which is slipped over a round container and shrunk to conform to it by heat.

lug finish. A glass container finish identified by horizontal tapering protruding ridges of glass that permit the specially shaped edges of the closure to slide between the protruding lugs and fasten securely with a partial turn. These lug finishes have the GPI designations in the 2000 series.

metalizing. Applying a thin coating of metal to a non-metallic surface. May be done by chemical deposition or by exposing the surface to vaporized metal in a vacuum chamber.

neck. (1) The narrow upper part of a container between the shoulder and the opening. (2) A round fitting in a can for the purpose of pouring the contents, covered by a closure. (3) A protuberance or nozzle enclosing the orifice of a collapsible tube and threaded on the outside to receive the cap, but sometimes threaded on the inside for special purposes. (4) In a set-up paper box, a shell inserted in the base of a shoulder box, attached by adhesive and extending above the base and into the lid when the box is closed.

neck-in. (verb) To form a portion of a container to a smaller size than the main part.

O.D.. Outside dimensions of a container, package, or part.

P.E.T. Polyester (polyethylene terephthalate).

packer. Line of bottles used primarily in pharmaceutical industry. Line has large finishes throughout, making bottles easy to pack.

plug stopper. A form of closure sometimes used on collapsible tubes in place of a cap or diaphragm (blind) closure. Stopper is made of cork, rubber or other material.

quality control. The operational techniques and the activities which sustain a quality of product or service that will satisfy given needs; also the use of such techniques and activities.

reshipper. Shipping container in which empty unit containers are received and intended to be used as shipping containers for the product packaged in the unit containers.

sealing disk. A circular piece of paper, plastic or other material, either smooth or crinkles, placed over the open top of a drum before seating the cover.

sifter top. Perforated top on a container, designed to dispense contents.

tamper-resistant seal. A seal that cannot be opened without partially destroying the cap or otherwise showing evidence of tampering. Tamper-resistant is not synonymous with non-refillable.

urea plastics. Plastics based on resins made by the condensation of urea and aldehydes.

wax board. Sometimes called waxed pulp, it consists of pulpboard dipped in melted paraffin wax, which forms a slightly protective film. Used as a liner in glass container closures. Inexpensive, but not a very satisfactory liner for most products.

yield. The amount of product obtainable from a given material.

