

Standard Terminology Relating to Buttons¹

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1. Scope

1.1 This terminology covers special terms or special meanings used in the button industry. These definitions apply only to sew-through flange and shank buttons.

1.2 The principal types of buttons defined in this terminology are illustrated in Figs. 1-8. These figures are descriptive only and are not intended to be restrictive as to design.

2. Referenced Documents

2.1 ASTM Standards:²

D 883 Terminology Relating to Plastics

D 3136 Definitions of Terms Relating to Permanent Care Labels for Consumer Textile and Leather Products Other than Carpets and Upholstery

3. Terminology

3.1 Definitions:

assembled button, *n*—a decorative button consisting of combinations of similar or dissimilar materials, such as plastic and metal or metal and metal, which have been joined together by such processes as gluing, swedging or metal stamping.

bridge, *n*—the area of a button between the holes partially covered by the sewing threads with dimensions varying upon design and end use.

button, *n*—a knot, disc, or similar object which when forced through a narrow opening or buttonhole, fastens one part of a garment or other flexible substrate to another.

DISCUSSION—Although the primary purpose of buttons is to serve as fasteners, buttons can also be used as decoration.

centrifugal cast button, *n*—see *rotation cast button*.

compression molding, *n*—the method of molding a material already in a confined cavity by applying pressure and usually heat.

compression molded button, *n*—a button or button blank



FIG. 1 Pin Shank

which is produced by compression molding, thermoset-molding compounds such as urea-formaldehyde, melamine-formaldehyde, styrene-modified polyester, or any combination thereof. This method using styrene modified polyester resin, and having in its formulation pearlescent pigments which are oriented in the molding process, form a button or button blank which resembles natural shell.

electroplated button, *n*—plastic buttons which have been made conductive by chemical treatment followed by the electroplating of metallic coatings.



FIG. 2 "U" Shank



FIG. 3 Stab or Screw Shank
Staple Buttons



FIG. 4 Bell Shank
Staple Buttons

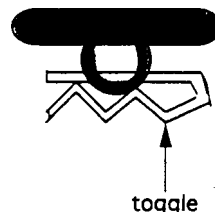


FIG. 5 Toggle
Staple Attached Buttons

¹ This terminology is under the jurisdiction of ASTM Committee D13 on Textiles and is the direct responsibility of Subcommittee D13.54 on Subassemblies.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

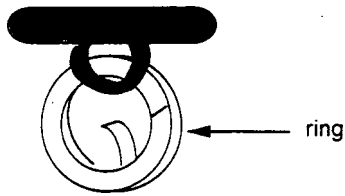


FIG. 6 Ring
Staple Attached Buttons

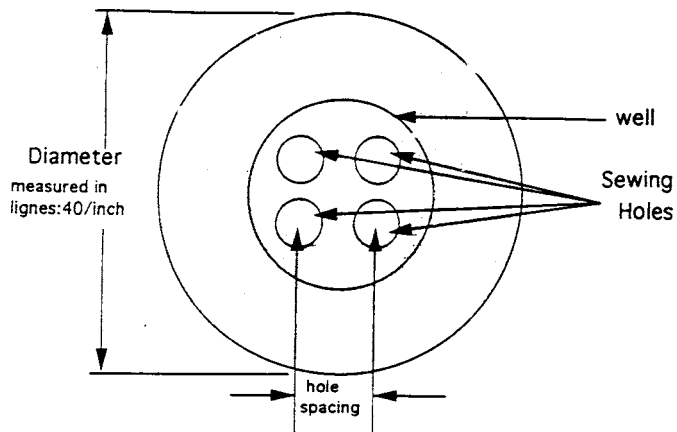


FIG. 7 Sew-Through Flange Button

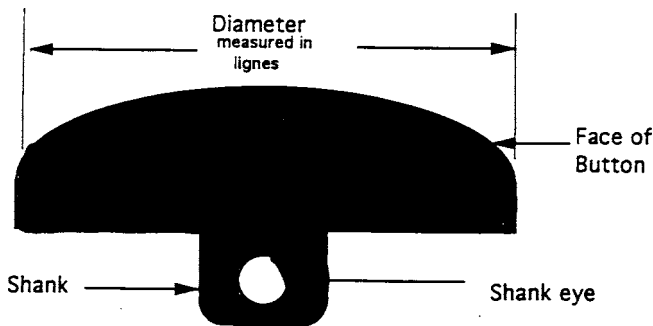


FIG. 8 Sew-Through Shank

DISCUSSION—*in buttons*, plastics such as polyester, acetate, ABS, melamine, and urea formaldehyde are the materials usually electroplated.

fabricate, *v—in buttons*, the conversion of a blank into a completed button.

DISCUSSION—Fabricating may require the turning of the face or back of the button with shaping tools, the drilling of sewing holes, and if required the grinding, slotting and any other decorative tooling or shank insertion which may be required.

face, *n—in buttons*, that portion which will be exposed after attachment to the substrate.

hole spacing, *n—on a button*, the distance from the center of one hole to another.

injection molding, *n*—the process of forming a material by forcing it, in a fluid state under pressure, through a runner system (sprue, runner, gate(s)) into the cavity of a closed mold.

laundering, *n*—a process used to refurbish a textile product or parts thereof by (1) cleaning it in water containing a cleaning agent, and possibly bleach, (2) drying it, and (3) usually ironing or pressing it.

launderability, *n*—the ability of a button to undergo multiple cycles of laundering without damage such as cracks or loss of finish.

ligne, *n*—a unit of measure for buttons; one ligne equals 0.635 mm (0.025 in.).

luster, *n—in buttons*, the degree of brilliance exhibited in pearlized or pearl buttons.

metal cast button, *n*—a button produced by the casting of molten metals and metal alloys into single-cavity or multiple-cavity molds.

DISCUSSION—Cast metal buttons can be electroplated and treated to produce other finishes.

orientation, *n—in buttons*, the degree of order and spatial alignment of pearlescent pigment crystals internally or in a coating.

pearlized, *n—in buttons*, the addition of synthetic or natural pearlescent pigments to the button resin formulation or to the formulation used for coating.

DISCUSSION—Buttons exhibiting a pearl-like luster are made in either of two ways: 1) by incorporating pearlescent pigments into the resin formulation prior to casting or molding the button, or 2) by applying to the button an external coating containing pearlescent pigments either by spraying or dipping.

ring, *n—in buttons*, a split ring used to fasten a staple attached button to the substrate.

rod cast button, *n*—a button fabricated from a disk sliced or sawed from a cast rod of formulated styrene-modified polyester resin.

DISCUSSION—Formulated styrene-modified polyester resin is cast into aluminum or glass tubes which are sealed at one end. The flaccid or rigid rod formed after gelation is removed from the tube and sliced or sawed into button blanks. The blanks are then fully polymerized (cured) in hot brine solution and fabricated into buttons. This method is used for buttons which are mottled, and multicolored.

rotation cast button, *n*—a button fabricated from a disk blanked from a partially polymerized sheet formed in a rotating cylinder (also known as centrifugal casting and wheel casting).

DISCUSSION—A resin mix prepared with catalyzed, promoted, and pigmented styrene-modified polyester resin is poured into a rotating cylinder to form a sheet of uniform layer. When gelled (polymerized) the flexible sheet is sliced in the cylinder for removal from the cylinder. The flaccid sheet is dye cut, with a multi-cutter tool, into button blanks. The blanks are then cured, usually in hot brine solutions, and fabricated



into buttons. This method is best for buttons produced with oriented pearlescent pigments, opaque white pigments, and multilayer combination of colors and mottles.

sewing hole, *n*—a hole in either the flange or shank of a button used to attach the button to the substrate by means of a needle and thread.

sew-through flange button, *n*—a button attached to one part of a flexible substrate by means of needle and thread passed through two or more holes in its flange and through the substrate. (Compare *sew-through shank button*.)

sew-through shank button, *n*—a button attached to one part of a flexible substrate by means of needle and thread passed through a hole or loop in the integral shank and through the substrate. (Compare *sew-through flange button*.)

shank, *n*—*in buttons*, that part positioned perpendicular to and at the center back of the flange, and having a hole or loop for use in attaching the button to one part of a flexible substrate by means of a needle or thread, a ring, or a toggle.

shank eye, *n*—*in buttons*, the hole or loop in the shank of a sew-through shank button or the hole in the loop of the staple of a staple button.

sheet cast button, *n*—a button fabricated from a disk blanked from a cast sheet of formulated styrene-modified polyester resin.

DISCUSSION—The formulated polyester resin mix (see *rotation cast buttons*) is poured into gasketed open molds or between gasketed sheets of glass. After gelation the sheet is stripped from the mold and die cut into multiple button blanks. The blanks are then cured (fully polymer-

ized) and fabricated into buttons. This method is best for buttons produced with oriented pearlescent pigments or opaque white pigments.

staple, *n*—*in buttons*, a looped metal shank securely positioned perpendicular to and at center back of the button flange for use in attaching the button to one part of a flexible substrate by means of a needle and thread, a ring, or a toggle.

toggle, *n*—*in buttons*, a clip used to fasten a staple button to the flexible substrate.

ring or toggle attached staple button, *n*—a button attached to one part of a flexible substrate by means of a ring or toggle rather than a needle or thread. The staple passes through an eyelet in the flexible substrate and is secured by the ring or toggle that passes through the staple eye.

two-front button, *n*—a button in which the face and back shape are identical.

DISCUSSION—Identical faces allow for easier feeding of buttons in automatic sewing machines without the use of a well for side-selection.

vacuum plated button, *n*—a button that is flash metal coated in vacuum chambers and subsequently colored to simulate other metal finishes.

DISCUSSION—This is the least durable of metallized finishes.

well, *n*—*in buttons*, a recess in center of sew-through flange button that give aesthetics and identifies the face side.

wheel cast button, *n*—see *rotation cast button*.

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