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evenly, and the ability to endure sustained production without constant maintenance. Using low-cost material to meet high performance requirements will compromise mold integrity. For example, for more than 90% of the molds, the cost of the cavity and core materials is less than 5% of the total mold cost. See **cost, product; mold cost.**

mold cavity, debossed. Depressed or indented lettering or designs in the cavity that produce bossed impressions on the molded part. See **decorating, fill-and-wipe.**

mold-cavity deposit A plastic build-up on a cavity's surface that is due to plate out of the plastic and usually is attributed to the use of certain additives.

mold-cavity draft On most molded parts, features must be cut into the surface of the mold perpendicular to the molding parting line. To properly release the part from the tool, parts almost always include a taper. The amount of mold draft required will depend on factors such as type of plastic being processed, processing conditions, and surface finish. For example, a highly polished surface will require less than an unpolished mold. Any surface texture will increase the draft at least 1° per side for every 0.001 in. (0.003 cm) depth of texture. Special mold-cavity surface action can be used. Elastomeric material has a rubbery condition and may not require the draft for ejection. Also called *draft in the direction of the mold.* See **mold-parting line; mold release agent.**

mold cavity, duplicate-plate A removable plate that retains cavities and is used where a two-plate operation is necessary for loading inserts.

mold cavity, etched A surface that is treated with an acid, leaving relief to form the desired design texture on the molded part. See **chemical etching; photoetching tool; surface treatment; texturizing.**

mold-cavity ejector Various mechanical means that are used to eject or remove the molded part from the cavity.

mold cavity, female The indented half of a mold that is designed to receive the male half. See **mold cavity, male.**

mold-cavity fill and pack See **injection molding, boost cut-off or two-stage control.**

mold-cavity filling See **mold-filling monitoring.**

mold-cavity finish, SPI/SPE Mold Standard See **surface finish.**

mold cavity, frozen-layer Plastic melt begins to "freeze" (solidify) as it fills an injection-molding mold cavity. The frozen layer can easily vary in thickness as the mold fills, producing different frictional shear forces. As a result, flow (filling) and solidification (thermoplastic cooling) should be evaluated together. See **freeze-off.**

mold-cavity grit blasting Blowing steel grit or sand onto the cavity wall to produce a rough surface. This surface treatment may be required to permit air to leave the

mold cavities by forcing a hob into a relatively s blank. Hobbing is a technique where a master n hardened steel is used to sink the shape of the cav a heated mild steel, such as beryllium copper. Th larger than the finished plastic molded part becau hobbing, the metal shrinks during cooling. See **e erosive cutting and sinking.**

mold-cavity honing Using a fine-grained wl or equivalent to obtain precise accuracy of the finish.

mold cavity, injection The two halves of th have a flat parting line. When the two halves me half is literally making contact by one flat surface another flat surface. Pressure on the injected mel cavity is through the plasticator's pressure-ram ac the melt. See **clamping; mold cavity, compr molding pressure required.**

mold-cavity land The length in the different g figurations that influence melt flow.

mold cavity, male The extended half of a m is designed to match the female half. Also called See **mold-cavity filling.**

mold-cavity melt-flow analysis A compre understanding of the mold filling process. Detaile mation is generated concerning the influence o filling conditions on the distribution flow patter vectors, shear stresses, frozen skin, temperatures, a sures. From these data, conclusions regarding e tolerances as well as part quality strength, appearar weld line can be drawn. The likelihood of warpi face, blemishes, and strength reductions due to hig stress can be anticipated. On this analysis, the best a practical mold-filling conditions can be selected. S **model; injection-molding melt flow; injection ing process-control parameter; melt-flow a processing fundamental; temperature transiti**

mold-cavity melt fountain flow The melt that enters the cavity (injection molding) by for fountain (balloon) stretching effect. The stretchin front-oriented outer surface covers the inside wal cavity. Melt that follows basically fills in the founta The result is a nonuniform orientation in the cross- of the molded part; however, parts can still meet part mance requirements. The degree of ballooning or formation is controllable so that specific desired pr can be obtained. See **injection-molding melt flo**

mold-cavity packing See **cushion; mold monitoring; packing factor.**

mold-cavity plating See **mold-cavity coatin**

mold-cavity pressure The cavity pressure can corded via a transducer such as one being located cavity near the gate. It can plot a profile that record ent information such as filling, packing, and holdir