



# PART DECORATION

## FOR PLASTIC INJECTION MOLDING

There are an assortment of ways to decorate or mark a plastic injection molded part for a variety of reasons, including aesthetics, branding and identification. Here are ten of the most common methods.

### 1 Pad Printing

Machines with silicone transfer pads take ink from an etched cliché and place it on the part; increasingly being replaced by thermal transfer

### 6 Inkjet Printing

Involves digitally printing a graphic onto a part; newer process; historically slower and more costly form of decoration; eliminates films, plates and clichés

### 2 Thermal Transfer

Full color image printed on adhesive polyester film is transferred onto the part; higher resolution, more durable, no drying or curing time needed

### 7 Screen Printing

Used for parts with flat or cylindrical surfaces; not recommended for parts with complex curves and shapes; can do metallic graphics; increased cost and time

### 3 Hot Stamping

Image with pre-dried ink is transferred onto the part with heat and pressure; ability to apply a metallic foil or embossing to plastic parts

### 8 Painting

Sometimes is utilized as a secondary operation; includes spray painting and powder coating; not performed by most injection molders; increased costs

### 4 Laser Marking

Includes laser marking, laser engraving, and laser etching; precise and repeatable; ability to decorate some hard-to-reach areas

### 9 Plating

Provides metal finish and some corrosion protection; tends to show any surface imperfections; includes hard chrome plating and electroless nickel plating

### 5 In-mold Decoration

A pre-printed plastic film or appliqué is placed in the mold, which then adheres to the part after it forms; usually increases manufacturing time, labor and costs

### 10 Hand Decorating

Often used as a last resort or possible cost savings, although requires manual labor and the associated costs; can include a hand stamp or other form of marking

