

Inconvenience or defect	Possible cause	Suggested solution
Incomplete filling of the mould	<p>Inadequate air vents. Pressure insufficient. Heating insufficient. Poor metering of material.</p>	<p>Create air vents. Increase pressure. Lengthen cycle or gradually increase temperature. Increase metering.</p>
Difficulty in demoulding	<p>Cold moulds. Insufficient cooling; pieces stick to mould. Insufficient tapering of the mould. Shrinkage on male. Insufficient knockout pins, unsatisfactory distribution or unsimultaneous operation of pins; rough mould surface. Insufficient solidification of injected material.</p>	<p>Reduce or remove mould water-circulation. Delay mould opening; use a chromium-plated and polished male and a chromium-plated and not polished female (or vice-versa). Increase tapering. Open mould sooner; keep male and female at different temperatures. Modify and/or repair (adjustment, polishing). Lengthen cooling with mould closed, cool moulds if necessary.</p>
Warpage of piece after demoulding	<p>Insufficient cooling in mould. Stresses caused by non-uniform cooling because of high thickness variations. Imperfect operation of ejection system.</p>	<p>Lengthen cooling in mould. Dimensional stability is obtained with long cycles and high injection temperatures in hot moulds. Quench pieces in water immediately after ejection or cool in mould. Use material with easier flow. Modify design of piece. Modify or repair.</p>
Internal delamination	<p>Flow of material between solidified external surfaces. Contaminated stock.</p>	<p>Increase injection pressure and raise temperature. Raise mould temperature. Check machine cleanliness and product quality (pay attention to scrap).</p>
Poor welds	<p>Incomplete filling of mould.</p>	<p>See « incomplete filling ».</p>
Glossy streaks	<p>Cold stock. Cold mould.</p>	<p>Increase injection temperature. Raise mould temperature.</p>
Dull radial streaking around sprue	<p>Stock temperature too high. Condensed moisture on mould. Entrapped water vapour.</p>	<p>Lower injection temperature. Dry mould. Predry granules.</p>
Yellowish spots	<p>Incipient degradation of polymer due to overheating.</p>	<p>Lower cylinder temperature and accelerate cycles.</p>
Burning (lines or black spots at edges of the piece)	<p>Insufficient venting.</p>	<p>Create or increase air vents. Lower injection temperature. Lower flow rate of material by increasing gate section or lowering injection pressure.</p>
Dripping from nozzle when mould open	<p>Degradation due to overheating; polymer has become too fluid and is giving off gas.</p>	<p>Lower temperature and carefully discharge cylinder with mould open.</p>