

performanceplastics

Fault	Recommendation
1. Short shot, record groove effect	<ol style="list-style-type: none"> 1. Adjust feed to minimum consistent cushion 2. Increase injection pressure 3. Increase injection speed 4. Increase back pressure 5. Increase barrel temperatures 6. Increase mould temperature, particularly for very thin large area parts 7. Check non-return valve 8. Improve venting 9. Enlarge gates, sprue diameters and runners.
2. Weld line	<ol style="list-style-type: none"> 1. Increase mould temperature 2. Increase injection speed 3. Increase melt temperature 4. Increase hold on pressure 5. Check venting 6. Relocate gate to change flow pattern
3. Sink marks	<ol style="list-style-type: none"> 1. Increase injection pressure 2. Optimise holding pressure time 3. Reduce screw speed 4. Reduce nozzle and metering zone temperatures 5. Increase feed zone temperature 6. Adjust back pressure 7. Increase mould temperature 8. Enlarge gates and runners
4. Burnt streaks (brown)	<ol style="list-style-type: none"> 1. Increase back pressure 2. Decrease screw speed 3. Increase cylinder temperature 4. Use machine with larger barrel shot size
5. Moisture streaks	<ol style="list-style-type: none"> 1. Sufficiently pre-dry material, check manufacturers guidelines 2. Check packaging 3. Check storage of material 4. If possible, feed directly from the dryer in a closed system 5. Increase back pressure

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Performance Plastics Injection Moulding Trouble Shooting Guide

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6. Cold slug	<ol style="list-style-type: none"> 1. Increase nozzle temperature 2. Reduce injection speed 3. Create cold slug well in the mould opposite sprue bush
7. Tails & Hooks especially near raised engraving etc.	<ol style="list-style-type: none"> 1. Reduce injection speed 2. Increase injection pressure 3. Increase mould temperature 4. Avoid sharp transitions, reduce engraving depth 5. Relocate gate
8. Glass fibre streaks	<ol style="list-style-type: none"> 1. Increase injection time 2. Increase mould wall temperature 3. Increase melt temperature 4. Optimise hold pressure time 5. Increase hold pressure
9. Jetting	<ol style="list-style-type: none"> 1. Reduce injection speed or injection profile (slow – fast) 2. Increase melt temperature 3. Impinge gate onto mould wall/surface 4. Smooth transition gate to moulded part 5. Increase gate diameter 6. Relocate gate
10. Diesel effect	<ol style="list-style-type: none"> 1. Check vents are clear of dirt / debris 2. Reduce clamping force of the machine 3. Reduce injection speed 4. Ensure vents are deep enough 5. Avoid entrapped air by changing flow profile
11. Flash	<ol style="list-style-type: none"> 1. Increase clamp force 2. Optimise change-over point 3. Reduce holding pressure 4. Reduce melt temperature 5. Reduce mould temperature 6. Stiffen mould
12. Delaminating	<ol style="list-style-type: none"> 1. Eliminate contamination 2. Check compatibility of dye / masterbatch 3. Check moisture content 4. Check melt homogeneity and plasticising performance 5. Reduce injection speed 6. Reduce melt temperature 7. Increase mould temperature

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13. Blister	<ol style="list-style-type: none">1. Slow down or reduce decompression2. Check granule feed3. Increase back pressure and adjust screw speed4. Reduce metering stroke
14. Dark spots	<ol style="list-style-type: none">1. Check granule for impurities2. Clean plasticising unit3. Reduce barrel temperature4. Reduce screw speed5. Reduce back pressure6. Check hot runner temperature7. Reduce regrind dose
15. Cloudy / milky transparent parts	<ol style="list-style-type: none">1. Check for cross contamination with other polymers in every area of operation.
16. Unusually low maximum service temperature	<ol style="list-style-type: none">1. Increase melt temperature2. Increase injection speed3. Optimise injection hold position and time4. Reduce injection pressure5. Increase mould temperature6. Maintain equal mould temperatures on both halves of mould tool7. Anneal parts at as high a temperature as possible