

POLIFIL® MATERIAL TROUBLESHOOTING GUIDE

DOING THE NEEDFUL SINCE 1973

Blisters

- 1. Reduce screw speed
- 2. Dry material
- 3. Increase back pressure

Brittleness

- 1. Reduce cylinder temperature
- 2. Reduce back pressure
- 3. Reduce screw speed
- 4. Check for material contamination
- 5. Dry material

Excessive Flash

- 1. Reduce cylinder temperature
- 2. Reduce back pressure
- 3. Reduce injection pressure
- 4. Increase clamp pressure
- 5. Clean mold faces
- 6. Check mold faces for proper fit

Gas Burns

- 1. Increase size of vent
- 2. Reduce injection speed
- 3. Increase size of gate

Oversized Part

- 1. Reduce injection speed
- 2. Reduce injection and holding pressure
- 3. Reduce cylinder temperature
- 4. Increase mold temperature
- 5. Reduce overall cycle time

Poor Part-to-Part Uniformity

- Check hopper for material bridging
- 2. Check heater bands, controllers and thermocouples
- 3. Check hydraulic system for pressure variation

Poor Weld Lines and Poor Surface Finish

- 1. Increase injection pressure
- 2. Increase mold temperature
- 3. Increase cylinder temperature
- 4. Increase injection speed
- 5. Clean cavity surface
- 6. Vent mold
- 7. Change gate location

Short Shots

- 1. Increase amount of material
- 2. Increase injection pressure
- 3. Raise material temperature
- 4. Increase injection time
- 5. Incorporate or enlarge venting
- 6. Clean vents
- 7. Increase back pressure
- 8. Increase size of ...
 - a. Sprue
 - b. Runners
 - c. Gates

Silver Streaking

- 1. Dry material
- 2. Increase injection speed
- 3. Increase cylinder temperature
- 4. Increase mold temperature
- 5. Decrease screw speed

Sink Marks

- 1. Increase injection pressure
- 2. Increase holding pressure
- 3. Increase holding time
- 4. Reduce cylinder temperature
- 5. Reduce mold temperature
- 6. Locate gates near heavy cross sections
- 7. Increase gate size

Undersized Part

- 1. Increase injection speed
- 2. Increase injection and holding pressure
- 3. Increase holding time
- 4. Increase cylinder temperature
- 5. Decrease mold temperature
- 6. Increase size of gate

Voids

- 1. Use dry material
- 2. Reduce cylinder temperature
- 3. Increase injection pressure
- 4. Increase mold temperature

Warping

- Check for uneven mold temperature
- 2. Reduce molded in stress
 - a. Reduce injection pressure
 - b. Relocate gating
- 3. Reduce temperature of ejected part
 - a. Increase cooling time
 - b. Lower mold temperature
- 4. Redesign ejection mechanism