



# 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

1. 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

1. 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