



Scan for Preview

DESIGN CONSIDERATIONS

1. Surface Finishes:

- SPI-A2 High polish, Grade #6 Diamond Buff
- SPI-B2 Finished with 400 grit paper, no tool marks
- SPI-C2 Finished with 400 stone, no tool marks
- SPI-D2 Finished with dry blast #240 oxide, no tool marks

2. Reduced wall thickness may save material, yet if sections are too thin they may not properly fill causing a short shot.

3. Bosses should be 40-60% of the nominal wall section. Incorporating gussets can provide added strength.

4. Various press-fit boss designs can help assemble parts together.

5. Core-out thick sections to avoid shrinkage, warp and surface flaws, such as sink.

6. Slide-by shutoffs can be used to form undercuts that are in line with a mold's pull direction.

7. Thickness of ribs should be 40-60% of the nominal wall section to avoid show surface flaws, such as sink.

8. Flow fronts that go around downstream features and melt back together create knit lines, which may cause weakness.

9. Side actions can be used to form undercuts that are not in line with a mold's pull direction.

10. Poorly designed bosses with thicker walls cause cooling problems which may result in sink.

11. Incorporate various styles of gussets to strengthen walls.

12. Gradual wall transitions with uniform thickness will reduce shear and turbulence.

13. Surface Textures:

| | | |
|---------|---------------|---------------------------|
| MT11000 | Depth 0.0004" | 1.0 degree draft required |
| MT11020 | Depth 0.0015" | 2.5 degree draft required |
| MT11040 | Depth 0.003" | 4.5 degree draft required |
| MT11060 | Depth 0.003" | 4.5 degree draft required |

14. Hinge designs are determined by performance, appearance and material requirements. Polypropylene or Polyethylene work best for a living hinge to fill and function successfully.

