

Injection Molding of MAGNUM™ 342EZ ABS Resin

Drying Recommendations

Moisture Content: It is recommended to dry this resin to less than 0.02% moisture.

Dryer: A desiccant-type dryer is recommended for this material. Hopper dryer may also be needed.

Dew Point: -20°F (-30°C) or lower is desired.

Drying Time: A minimum of 2 hours at 180-185°F (82-85°C) is recommended.

Equipment Specifications

Shot Size: As required to fill part.

Clamp Tonnage: 2.0-3.0 tons/in² (0.28-0.42 tonnes/cm²) of projected surface area.

Barrel Capacity: Minimum of three times shot size, but no greater than six times shot size (i.e.: if shot is 10 oz., barrel capacity should be 30-40 oz., but no greater than 60 oz.). For short barrel machines, if shot size exceeds 50% of barrel capacity, increase “feed” and “transition” barrel temperatures by 15°F (8°C).

Process Conditions

Melt Temperature: Can be varied as required to fill part. See Table 1.

Mold Temperature: Can be changed to affect gloss or demolding characteristics. See Table 1.

Manifold/Drop Temperature: Range of 15-25°F (8-14°C), aim of 20°F (11°C) below melt temperature. See Table 1 for recommended melt temperatures and adjust manifold/drop temperature accordingly.

Purging/Shutdown: For short interruptions in production, empty the barrel and reduce barrel temperatures. For extended shutdowns, purge the machine with a purging compound or general purpose polystyrene before shutting down machine.

Table 1: Machine Temperature Recommendations

| Temperatures | Range, °F (°C) | Aim, °F (°C) |
|---------------------|-------------------|--------------|
| Melt Temperature | 450-480 (232-249) | 465 (241) |
| Mold Temperature | 80-120 (27-49) | 100 (38) |
| Barrel – Feed | 360-390 (182-199) | 375 (191) |
| Barrel – Transition | 410-440 (210-227) | 425 (218) |
| Barrel – Metering | 435-465 (224-241) | 450 (232) |
| Nozzle | 445-475 (229-246) | 465 (241) |

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.



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