

# Injection Molding of MAGNUM™ 357HP/358HP 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/in<sup>2</sup> (0.28-0.42 tonnes/cm<sup>2</sup>) 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	470-520 (243-271)	495 (257)
Mold Temperature	100-150 (38-66)	125 (52)
Barrel – Feed	405-455 (207-235)	430 (221)
Barrel – Transition	425-475 (218-246)	450 (232)
Barrel – Metering	455-505 (235-263)	480 (249)
Nozzle	470-520 (243-271)	495 (257)

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