



DIAMOND POLYMERS, INC.

**ABS**

## RECOMMENDED PROCESSING GUIDELINES

DIAMOND POLYMERS ABS has a wide variety of excellent properties, i.e. superior impact resistance, high flexural strength, high rigidity, high heat distortion temperature, good electrical properties, good chemical resistance and outstanding dimensional stability.

DIAMOND POLYMERS ABS resins are easily molded in standard injection and extrusion machines using established techniques.

DIAMOND POLYMERS ABS also has excellent secondary processability in vacuum forming, plating, vacuum metalizing, sputtering, coating and mechanical works.

### INJECTION

ABS resin usually absorbs about 0.3% of water. In order to get complete molded products without splay, it should be dried prior to molding to a level of 0.1% or less. Drying can generally be performed in 2 - 4 hours at 80° - 85°C (176° - 185°F) in a desiccant dryer.

Higher mold temperature provides a product with excellent surface finish and less residual stress.

Molding conditions should be properly controlled depending on the molding machines as well as the size and the design of the molded products. The following parameters, however, are given below to assist in establishing molding conditions.

| Description        | Standard                                  | High Flow                                 | Heat Resistant                            | Low Gloss                                 |
|--------------------|---|---|---|---|
| Drying             | 80° - 85°C<br>176° - 185°F<br>2 - 4 hours | 80° - 85°C<br>176° - 185°F<br>2 - 4 hours | 82° - 90°C<br>180° - 195°F<br>2 - 4 hours | 80° - 85°C<br>176° - 185°F<br>2 - 4 hours |
| Barrel Temperature | 190° - 250°C<br>374° - 482°F              | 180° - 240°C<br>356° - 464°F              | 200° - 250°C<br>392° - 482°F              | 200° - 220°C<br>392° - 428°F              |
| Mold Temperature   | 40° - 80°C<br>104° - 176°F                | 40° - 80°C<br>104° - 176°F                | 40° - 80°C<br>104° - 176°F                | 40° - 60°C<br>104° - 140°F                |
| Injection Molding  | Med. - Fast                               | Med. - Fast                               | Med. - Fast                               | Slow - Med.                               |