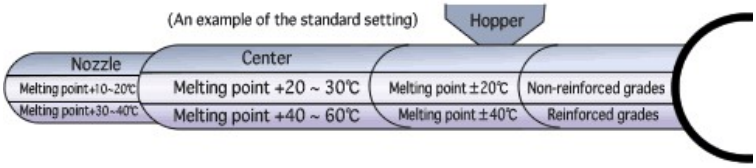
Molding process

1. **Pre-drying of pellets**
   (1) TOYOBO NYLON is shipped as a dried pellet packed into a moisture-proof bag, then, if the pellet is processed immediately after unsealing the bag, pre-drying of the pellet is not required.
   (2) However, If the pellet is exposed in the air as it is, it will absorb moisture. Therefore, please avoid exposing the pellet in the air for a long time.
   (3) The standard drying condition for moisture-absorbed pellets is set to 3 ~ 5 hours at 80 ~ 120°C. However, please remember that drying for a long time would cause coloring in the pellet due to oxidation.

2. **Setting of cylinder temperatures**



(Notes) Please set the applied temperature of purging resins not more than 300°C for general nylons or 330°C for 6T-Nylon. Otherwise, thermal decomposition occurs resulting deterioration in quality, which will cause troubles with burning and poor hue.

3. **About molds (Particularly for reinforced nylons)**
   (1) Quality of mold materials
   In general, the reinforced nylons with fillers such as glass fibers will develop larger mold abrasion during molding than use of non-reinforced nylons. Therefore, please pay attention to the following. Especially for the gate, please try to select a mold material in line with the following.
   ① Alloy tool steel such as SK, SKS or SKD treated with hardening and tempering may be used as HRC55 ~ 60.
   ② Pre-hardened steel and precipitation hardening steel may be used.
   ③ Surface hardening treatment is effective.

   - Rigid chrome plating treatment
   - Nitriding treatment
   - Cermet treatment

   (2) Gate
   When a gate is designed, it should be carefully considered for glass fibers to avoid their snapping. As the fluidity of GF reinforced nylons is not so good as non-reinforced nylons, it is important to give a well rounded corner at the joint between a runner and a gate in order to reduce their flow resistance.
   Since notable weld lines, reduced strength or deformations of moldings may occur depending on the gate position, please give due considerations on them.
   As a guide to the dimensions of a side gate, please take a thickness about 60% of the molding thickness, a width as 1.5 ~ 3 times as wide as the gate thickness, and a land length as about 50% of the gate thickness. For a pinpoint gate, the gate size of 0.8 ~ 1.5É” will be an index.
   (3) Vent
   Reinforced nylons easily generate more gas than non-reinforced nylons do. Thus, please ensure good breathing by fitting with air-vents of about 50 É m deep in way of the region where resin flows meet.

Metal quality and life
Estimating of life vs. mold hardness can be roughly guided with the following chart.