

Q: We are a small business and make these parts in-house using an injection molding machine. The material is Nylon 6-6. Sometimes our parts contain microscopic bubbles and/or streaks. Why?

A: Nylon injection molding pellets are hygroscopic (i.e., they absorb moisture rapidly from the air). When heated in the injection molding machine's barrel this moisture turns to steam forming bubbles inside the part. Sometimes these bubbles take the form of streaks due to the plastic's flow inside the mold (the defects are sometimes called silver streaking or splay).

The solution is to keep the pellets dry before molding by protecting them from the atmosphere, and drying them right before molding using a hopper dryer or an oven (for very small quantities such as for prototype runs).

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Dean Poeth, Ph.D., P.E., C.Mfg.E. (<http://poeth.com/>) answers manufacturing questions. For more than 25 years Dr. Poeth has held key technical positions in manufacturing, design, and technical management. He specializes in design for manufacturing, training, affordability, and manufacturing productivity improvement.

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