

TECHNOMELT Materials

Drying Guidelines for TECHNOMELT Materials

TECHNOMELT materials must be molded with low moisture content to avoid splay and possible brittleness due to degradation.

Moisture has a significant effect on TECHNOMELT polyamides in processing: Heating to molding temperatures while wet (>0.2% moisture content) will result in hydrolytic degradation and a significant loss of physical properties. Hydrolytic degradation is a chemical reaction that occurs at high temperatures with some polymers in the presence of water. It causes primary bonds in the molecular chains to be severed, thus reducing molecular weight.

Overdrying (>0.08% water) will remove the plasticizing effect of the water molecules and make the resin viscous and hard to flow.

The TECHNOMELT materials are dried to 0.2% moisture in the manufacturing process prior to discharge into sealed, polyethylene/foil/polyethylene triple-wall, moisture-resistant bags. Damaged or cut bags should be assumed to have picked up moisture from the air and thus the material should be dried.

Oven or dehumidifying dryers are recommended with oven dryer temperatures set at 180°F for 3 hours to sufficiently dry the material. An air oven with recirculated, dehumidified air is recommended. The depth of the resin tray should not exceed 1 inch.



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