

Molded Pallet Production

Anti-Sticking and Demolding Management SOP

Purpose

To ensure smooth demolding of molded pallets during production, avoid pallet sticking issues, prevent product defects and mold damage, improve production efficiency, and increase product yield.

Scope

Applicable to all molded pallet production processes in [Palletsbiz](#) compression molding workshop.

Process Parameter Standards

Item	Standard Value
Mold Temperature	180°C - 200°C
Holding Time	250s - 350s
Release Agent Type	High-temperature resistant MDI silicone-based release agent
Release Agent Spraying Frequency	Once per molding cycle, ensure uniform spraying
Mold Cleaning Frequency	Once per shift thoroughly, clean after production

Operating Procedure

1. Mold Inspection

Confirm the mold surface is free from residual glue, carbonized material, metal scraps, and dust. If residues are found, clean with special mold cleaner and non-woven fabric, or gently scrub with a copper brush. Steel brushes are strictly prohibited.

2. Release Agent Preparation

Check the release agent's product name, batch number, and expiry date to ensure compliance. Shake well before use.

3. Release Agent Application

Use a high-temperature spray gun or sprayer, maintain a 20-30 cm distance from the mold surface, and spray evenly. Pay extra attention to edges, corners, grooves, and height difference areas. Ensure the mold surface is coated with a continuous and even oil film — no missed spots or excessive pooling.

4. Glue Addition Control

Measure glue quantity according to ratio requirements to avoid overuse. Glue must be evenly mixed with raw material to prevent overflow. Ensure no glue drips onto areas outside the mold.

5. Molding Process

Set mold temperature, pressure, and holding time according to the standard parameters. Ensure stable production, avoiding temperature or pressure abnormalities.

6. Demolding Inspection

After holding time, slowly open the mold. Check pallet edges and mold surface for glue adhesion. Only remove the product if no sticking is found.

7. Handling Abnormal Sticking Issues

If pallet sticking occurs: Shut down the equipment and allow mold to cool to a safe temperature. Spray release agent softener on the stuck area, wait 3-5 minutes, and then gently demold by hand. Clean the mold and reapply the release agent before continuing production.

8. Daily Mold Maintenance

Clean mold surface of glue and carbonized residue thoroughly every shift. Perform a complete mold maintenance once a week, including grinding, polishing, and spraying anti-rust agent for storage.

Quality Control Checkpoints

Inspection Item	Frequency	Method
Mold Surface Cleanliness	Twice per shift	Visual + tactile check
Release Agent Spraying Uniformity	Every molding cycle	Visual inspection
Smooth Demolding of Finished Products	Every molding cycle	Operator confirmation

Safety Precautions

- Always wear gloves and safety goggles when operating.
- Keep release agent and softener away from open flames and high heat sources.
- Prohibit over-temperature and over-pressure operations.