

# Daily Maintenance Methods

## 1. Cleaning Process : Avoid Damaging the Coating and Substrate

**Temperature Control :** Clean the baking tray only after it has cooled down to below 50 ° C ( Contacting with cold water at high temperatures can cause deformation, and although the coating is heat-resistant, it is not resistant to sudden cooling. )

**Tool Selection:** Use a soft sponge, nylon brush, or special non-stick cleaner (Avoid steel wool and metal spatulas) . For burnt residues, soak in warm water with neutral detergent for 30 minutes first, then gently wipe.

**Chemical Control:** Do not use strong acids or strong alkalis (such as industrial scale removers). Give priority to using neutral detergents with a pH value of 6-8. After cleaning, rinse thoroughly with water to prevent detergent residues from corroding the tray.

**Chemical corrosion may cause coating failure or substrate rusting. Spraying alcohol on the baking tray is strictly prohibited.**

**Case 1:** Soaking the baking tray in strong acid (such as hydrochloric acid) or strong alkali (such as sodium hydroxide) cleaners for a long time (for removing oil stains quickly) , corroding the chemical bonds of the non-stick coating or dissolving it, causes the coating to lose its adhesion.

**Case 2:** Rust appears at the bottom or edges due to prolonged exposure to a humid workshop after washing without drying the water. The rust will further damage the bond between the coating and the substrate.

**Case 3:** After baking high-salt and high-sugar materials (such as cured meat and caramel), the residual materials are not cleaned in time. The corrosive components adhere to the surface of the baking tray for a long time, causing local coating "corrosion and perforation".

### **Coating peeling caused by scratching or friction from hard objects**

**Case 1:** Using metal scrapers, steel wool, or hard plastic shovels to forcefully scrape off charred residues (such as bread crumbs or solidified syrup) from the baking tray directly scrapes off the non-stick coating (e.g., Teflon), exposing the base material.

**Case 2:** When cleaning, stacking multiple baking trays disorderly in the sink causes mutual friction between trays, resulting in the coating being "abraded or scratched" .

## **2. Storage Process: Reduce Physical Friction and Pressure.**

**Stacking Specifications:** For trays of the same size, the stacking height shall not exceed 5 pieces (especially for aluminum alloy trays). Place soft paper or silicone pads (thickness  $\geq 1$ mm) between each layer

to prevent direct friction of the coating.

**Location Selection:** Store in a dry and ventilated area (relative humidity  $\leq 60\%$ ), away from steam outlets and faucets (to prevent rust). Carbon steel trays must be completely dried before storage, and a thin layer of oil (such as vegetable oil) can be applied regularly for rust prevention.

**Classified Storage:** Separate coating (non-stick) and uncoating baking trays to avoid cross-damage caused by mixed use of tools.

**Physical collision/extrusion causes deformation or structural damage.**

**Case 1:** When handling, the edges of baking trays collide with the metal frame of the assembly line or are mistakenly hit by forklift tines, causing edge dents and bottom bulges, which leads to uneven heating during subsequent baking.

**Case 2:** During multi-layer stacking storage, the bottom baking tray bears excessive weight (e.g., stacking more than 10 heavy-duty trays), causing the middle of the bottom to collapse or the sides to warp due to long-term pressure (especially for aluminum alloy trays, which are more prone to deformation due to lower hardness).

**Case 3:** Using metal tools (such as iron bars or wrenches) to strike baking trays for cleaning residual materials results in local holes or cracks.

### 3. Usage Process: Minimize Unnecessary Wear and Tear

**Pre-treatment:** Before first use of a new non-stick baking tray, wash it with warm water, dry it, apply a thin layer of oil (e.g., olive oil), and bake it in an oven at below 100°C for 20 minutes to form a protective film (enhancing coating abrasion resistance).

**Temperature Control:** Avoid exceeding the coating's tolerance temperature: for example, Teflon coating  $\leq 250^{\circ}\text{C}$ .  
**Material Adaptation:** For high-salt or high-sugar ingredients, use baking paper to reduce direct contact. Avoid baking hard ingredients (such as frozen dough blocks) to prevent collision with the coating.

**Remarks:** For Taishuo T-ReXL non-stick coating products, there is no need to season the tray with oil after receipt. Simply wash and dry it before making cakes, and it is ready for use.

**Temperature sudden change causes coating cracking or deformation.**

**Case 1:** A baking tray removed from a 200°C oven is immediately cooled with cold water (for rapid turnover). The metal under high temperature contracts unevenly due to sudden cooling, causing the coating to crack or the tray to deform as a whole.

**Case 2:** A baking tray in a low-temperature environment (e.g., a winter workshop) is placed directly into a high-temperature oven without preheating (with a temperature difference exceeding 150°C).

Due to excessive thermal expansion speed, the coating separates from the base material, forming "bulges" before peeling off.

#### **4. Inspection Process: Timely Address Minor Damages**

Weekly check baking trays for deformation, coating peeling, rust, etc. Trays with minor scratches (without exposing the base) can be used continuously, but avoid contact with hard objects.

If the coating peeling area exceeds 5% or obvious deformation occurs, scrap them promptly (continued use may cause material adhesion, uneven heating, or even product contamination).

Standardized operation, scientific cleaning, and reasonable storage can significantly reduce unnecessary wear and tear, typically extending the service life by 30%-50% (e.g., ordinary aluminum alloy trays can be extended from 6 months to 9-12 months).