**uxcell a24111100ux2850**

# uxcell POM Anti-Backlash Nut Block Instruction Manual

Model: a24111100ux2850

## 1. Product Overview

The uxcell POM Anti-Backlash Nut Block is a component designed for use in 3D printers and CNC machines. It is engineered to reduce backlash in lead screw mechanisms, ensuring precise and smooth motion. Made from durable POM plastic, this nut block offers wear resistance and heat resistance, contributing to the longevity and performance of your equipment.
This package includes 2 anti-backlash nut blocks, 2 self-locking nuts, and 1 wrench.


Image 1.1: Two uxcell POM Anti-Backlash Nut Blocks included in the package.

## 2. Key Features

- **Material:** Constructed from POM plastic, known for its wear-resistant and heat-resistant properties, ensuring durability and smooth operation.
- **Anti-Backlash Design:** Features strong self-locking capabilities to effectively reduce the risk of loosening and maintain optimal performance during frequent starts and stops.
- **Compatibility:** Designed for 8mm diameter lead screws with a 2mm pitch and 2mm lead.
- **Application:** Primarily used in the power transmission systems of 3D printers and CNC machines for model making and part manufacturing.

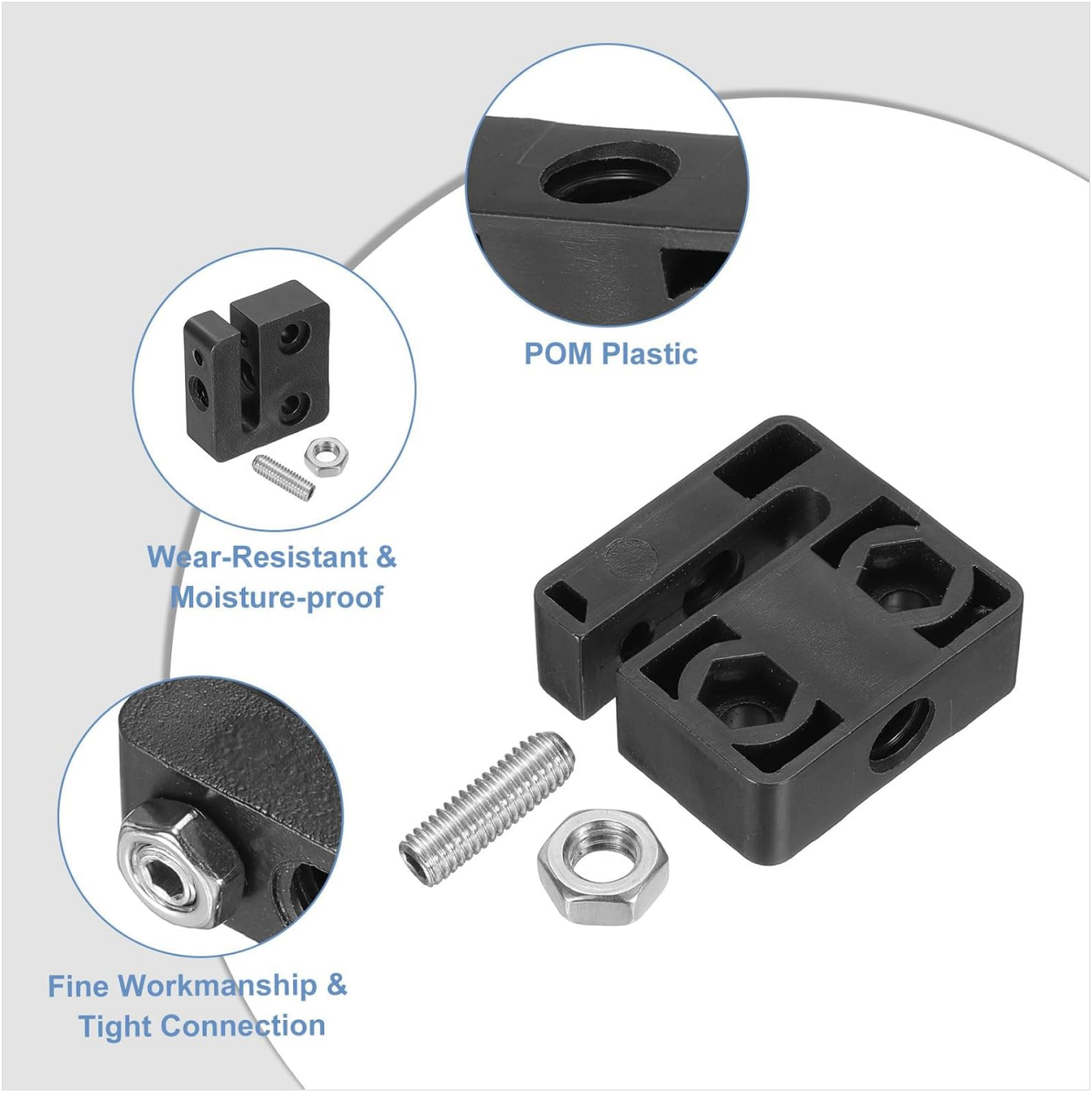


Image 2.1: Detailed view of the POM plastic construction, emphasizing wear-resistant and moisture-proof qualities, fine workmanship, and tight connection points.

## 3. Specifications

| Parameter | Value |
|---|---|
| Material | POM Plastic |
| Lead Screw Diameter | 8 mm / 0.31 inch |
| Pitch | 2 mm / 0.08 inch |
| Lead | 2 mm / 0.08 inch |
| Package Includes | 2 x Anti-Backlash Nut Blocks, 2 x Self-Locking Nuts, 1 x Wrench |
| Model Number | a24111100ux2850 |
| Manufacturer | uxcell |

| | |
|---|---|
| Country of Origin | China |


Image 3.1: Product size diagram illustrating the 8mm diameter, 2mm lead, and 2mm pitch specifications.

## 4. Installation (Setup)

1. **Preparation:** Ensure your 3D printer or CNC machine is powered off and the lead screw is accessible. Identify the existing nut block that needs replacement or the location for a new installation.
2. **Selection:** Verify that the uxcell Anti-Backlash Nut Block matches the diameter, pitch, and lead of your lead screw (8mm diameter, 2mm pitch, 2mm lead for this model).
3. **Mounting:** Slide the anti-backlash nut block onto the lead screw. The internal thread connection is designed for easy installation. Align the mounting holes on the nut block with the corresponding holes on your equipment.
4. **Securing:** Use appropriate fasteners (not included, typically provided with the machine) to secure the nut block to the machine's carriage or frame. Ensure a snug fit without overtightening, which could deform the plastic.
5. **Adjusting Self-Locking Nuts:** The included self-locking nuts are designed to maintain tension and

prevent loosening. Use the provided wrench to adjust these nuts as needed to achieve the desired anti-backlash effect. Avoid excessive tightening that could impede smooth movement.

This nut block serves as a tool for maintaining or restoring the working condition of your equipment by providing a stable and precise lead screw interface.

Image 4.1: The anti-backlash nut block shown installed on a lead screw, demonstrating its function in a power transmission system.

## 5. Operation

Once installed, the uxcell POM Anti-Backlash Nut Block operates as an integral part of your 3D printer or CNC machine's linear motion system. Its primary function is to eliminate or significantly reduce backlash (play) between the lead screw and the nut, which is crucial for achieving high precision in additive manufacturing and subtractive machining processes.

- **Smooth Motion:** The POM material and anti-backlash design contribute to smooth and consistent movement along the lead screw axis.
- **Precision:** By minimizing backlash, the nut block helps maintain accurate positioning, leading to higher quality prints or cuts.

- **Reliability:** The self-locking feature ensures that the nut block remains securely engaged, even during frequent starts, stops, and direction changes, enhancing the overall reliability of the power transmission system.

No specific operational steps are required for the nut block itself beyond its initial installation and adjustment. Its function is passive, ensuring the lead screw system performs optimally.

## 6. Maintenance

Proper maintenance of the anti-backlash nut block ensures its longevity and continued performance:

- **Regular Inspection:** Periodically inspect the nut block for any signs of wear, cracks, or deformation. Check the tightness of the self-locking nuts and mounting fasteners.
- **Cleaning:** Keep the lead screw and the nut block free from dust, debris, and filament residue. A soft brush or compressed air can be used for cleaning.
- **Lubrication:** While POM is a self-lubricating plastic, light lubrication of the lead screw with a suitable lubricant (e.g., PTFE-based grease or silicone oil) can further reduce friction and extend the life of both the lead screw and the nut block. Avoid petroleum-based lubricants that may degrade plastics.
- **Replacement:** If significant wear or damage is observed, replace the nut block to maintain optimal machine performance and prevent further damage to the lead screw.

## 7. Troubleshooting

This section addresses common issues that may arise with lead screw systems where an anti-backlash nut block is used.

### Issue: Excessive Play or Backlash

- **Cause:** Self-locking nuts are loose, or the nut block is worn.
- **Solution:** Tighten the self-locking nuts using the provided wrench. If tightening does not resolve the issue, the nut block may be worn and require replacement.

### Issue: Sticking or Rough Movement

- **Cause:** Lead screw or nut block is dirty, or insufficient lubrication.
- **Solution:** Clean the lead screw and nut block thoroughly. Apply a suitable lubricant to the lead screw. Ensure the lead screw is straight and not bent.

### Issue: Nut Block Loosens from Mount

- **Cause:** Mounting fasteners are loose.
- **Solution:** Check and tighten all mounting fasteners securing the nut block to the machine.

## 8. Warranty Information

Specific warranty details for the uxcell POM Anti-Backlash Nut Block are not provided in this manual. Please refer to the product packaging or contact uxcell customer support for warranty information.

## 9. Support

For further assistance, technical support, or inquiries regarding the uxcell POM Anti-Backlash Nut Block, please visit the official uxcell website or contact their customer service department. Contact information may

also be available on the product packaging.
You can often find support resources and FAQs on theuxcell Store on Amazon.