uxcell TRTI189A778

uxcell Nitrile Rubber O-Rings Instruction Manual

Model: TRTI189A778

1. Product Overview

The uxcell Nitrile Rubber O-Rings are designed for sealing applications in various mechanical and plumbing systems. These O-rings provide a secure seal to prevent leaks and are suitable for a wide range of temperatures and pressures. This manual provides essential information for proper selection, installation, and maintenance.

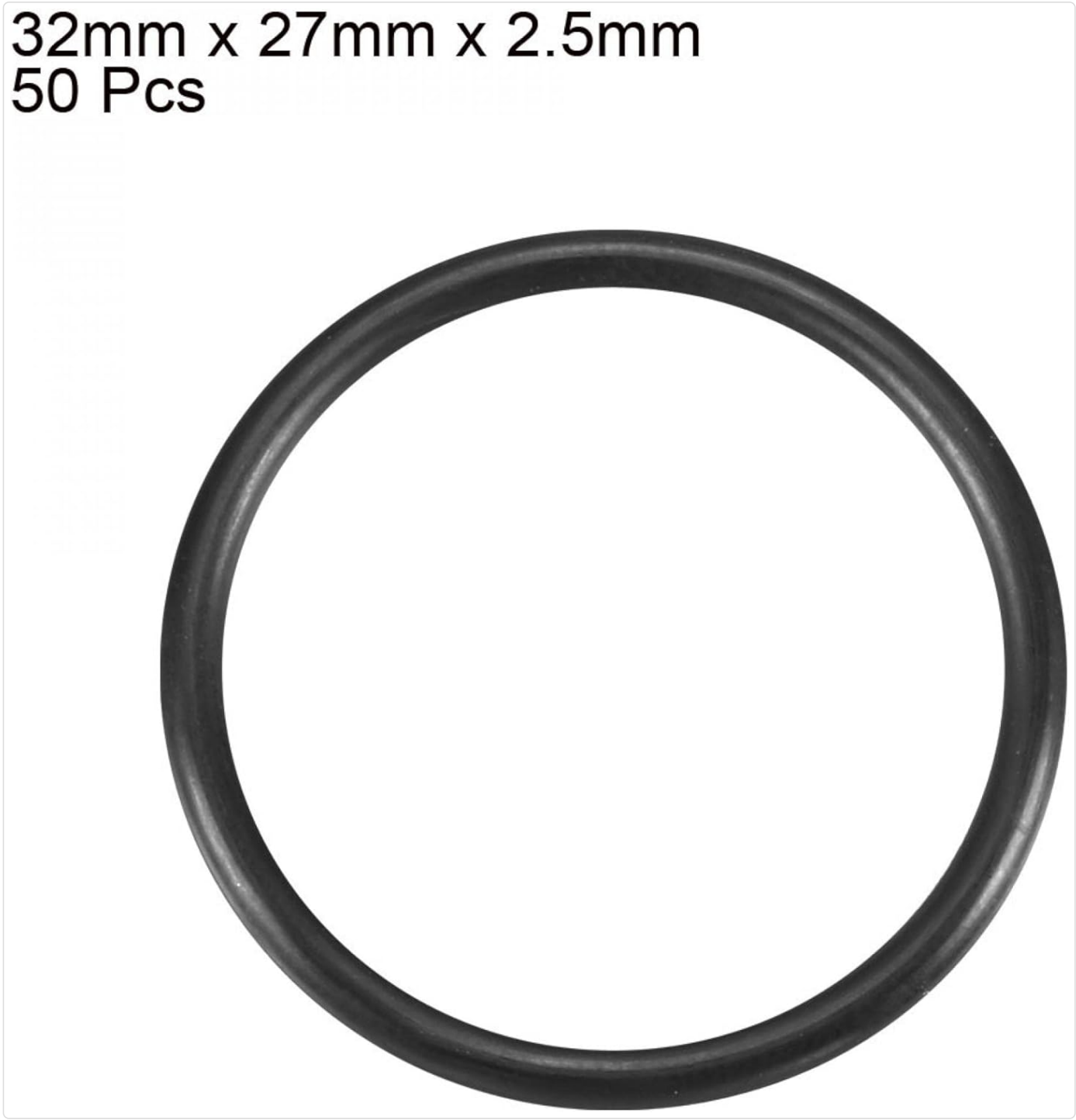


Image 1.1: A single uxcell Nitrile Rubber O-Ring, illustrating its circular form and material.

2. Specifications

These O-rings are manufactured from Nitrile Butadiene Rubber (NBR), known for its resistance to oils, fuels, and other chemicals. Key specifications are detailed below:

- **Size:** 32mm Outside Diameter (OD), 27mm Inner Diameter (ID), 2.5mm Cross-Section Diameter (Width)
- **Material:** Nitrile Rubber (NBR)
- **Hardness:** 70A Durometer (Shore Hardness)
- **Temperature Range:** -4°F (-20°C) to 212°F (100°C)
- **Quantity:** Pack of 50
- **Model Number:** TRTI189A778
- **Part Number:** a12040200ux0344

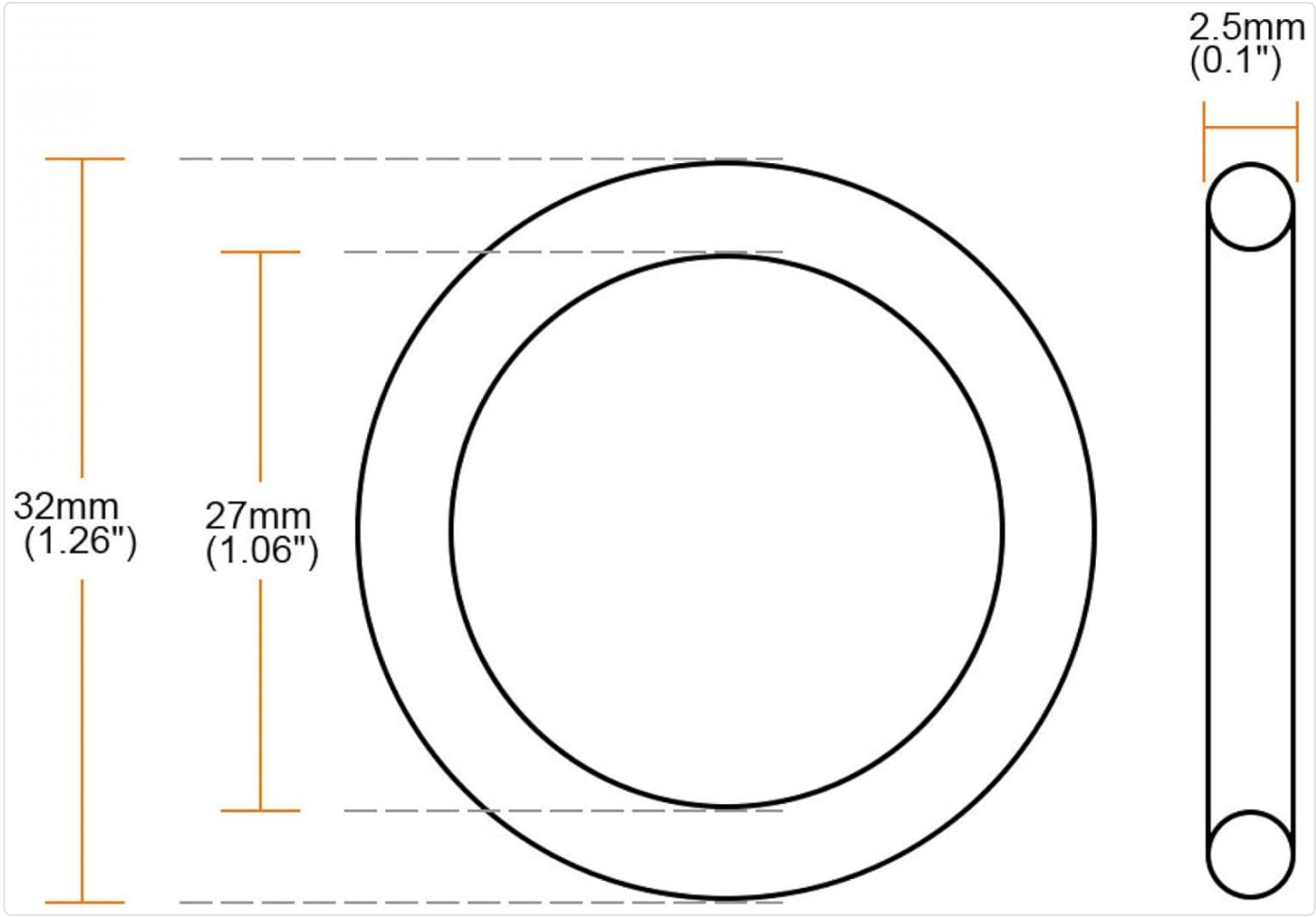


Image 2.1: Dimensional diagram of the O-ring, indicating its outside diameter, inner diameter, and cross-section width.

3. Measurement and Selection

Accurate measurement is critical for selecting the correct O-ring size to ensure an effective seal. An improperly sized O-ring can lead to leaks or premature failure.

3.1. Measuring O-Ring Dimensions

- For O-rings with an Inner Diameter (ID) of 1-30mm, measurement can be performed using a pin gauge.
- For O-rings with an ID of 30-60mm, an O-ring measuring ruler can be used. The ID is calculated as Ld/π (where Ld is the measured length).
- For O-rings with an ID of ≥60mm, use an O-ring measuring ruler or a soft ruler. The Outer Diameter (OD) is calculated as Ld/π.
- Ensure there is no deformation or gap during measurement to obtain accurate readings.

Image 3.1: Various methods for accurately measuring O-ring dimensions, including the use of specialized tools.

3.2. Material Compatibility

Nitrile rubber is suitable for applications involving petroleum-based oils, hydraulic fluids, water, and alcohols. It is generally not recommended for use with brake fluids, ketones, or strong oxidizing agents. Always verify material compatibility with the specific fluids and environmental conditions of your application.

4. Installation Guidelines

Proper installation is crucial for the longevity and effectiveness of the O-ring seal.

1. **Clean Surfaces:** Ensure all sealing surfaces are clean, free from dirt, debris, and sharp edges that could damage the O-ring.
2. **Lubrication:** Lightly lubricate the O-ring with a compatible lubricant (e.g., silicone grease or the system fluid) before installation. This aids in seating and reduces friction during assembly, preventing twisting or pinching.

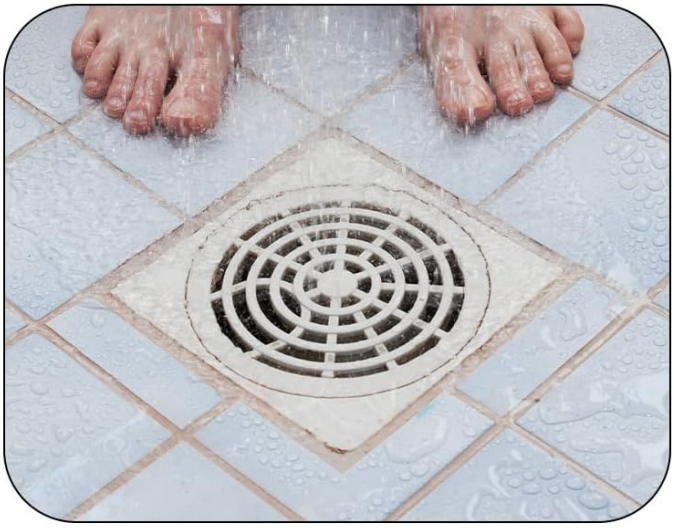
3. **Proper Seating:** Carefully place the O-ring into its groove. Ensure it is not stretched excessively, twisted, or pinched during assembly. The O-ring should sit evenly within the groove.
4. **Avoid Over-Compression:** Do not over-tighten components, as this can lead to excessive compression of the O-ring, causing premature wear and failure.

5. Applications

These Nitrile Rubber O-Rings are versatile and widely used in various sealing applications due to their material properties and standard sizing. Common applications include:

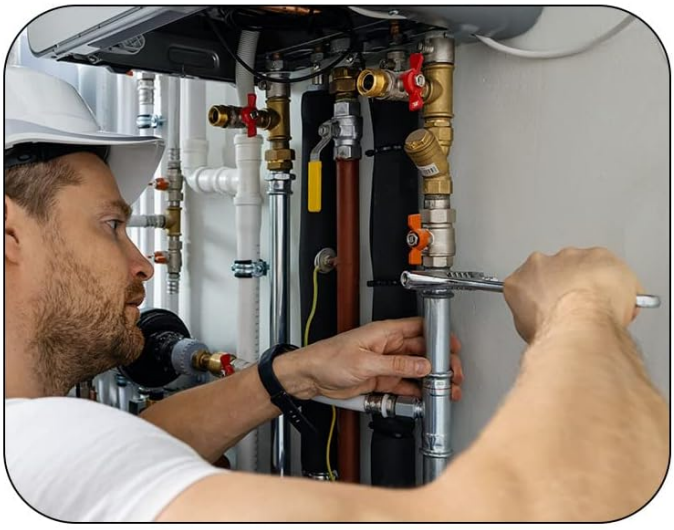
- Pressure washers
- Filters
- Pumps
- Water hoses
- Plumbing pipes and faucets
- Garage maintenance
- General mechanical sealing

Faucet



Floor Drain

Shower



Pipe Interface

Image 5.1: Examples of common applications for O-rings in household plumbing and mechanical systems.

6. Maintenance and Troubleshooting

6.1. Maintenance

Regular inspection of O-rings in critical applications can prevent failures. Look for signs of wear, cracking, hardening, softening, or swelling. Replace O-rings that show any signs of degradation or damage. Store unused O-rings in a cool, dry place away from direct sunlight and ozone-generating equipment to preserve their material integrity.

6.2. Troubleshooting Leaks

- **Leakage:** If a seal leaks, first check if the O-ring is correctly sized for the groove. An O-ring that is too small may not provide adequate compression, while one that is too large may be pinched or extruded.
- **Damage:** Inspect the O-ring for cuts, nicks, or abrasions that could compromise the seal. Replace any damaged O-rings.
- **Material Degradation:** If the O-ring shows signs of chemical attack (swelling, shrinking, hardening, or softening), ensure the material is compatible with the fluid it is sealing.
- **Improper Installation:** Re-check that the O-ring was not twisted or pinched during installation. Disassemble, inspect, and re-install if necessary, ensuring proper lubrication.

7. Warranty and Support

For specific warranty information or technical support regarding your uxcell Nitrile Rubber O-Rings, please refer to the product packaging or contact uxcell customer service directly. Ensure you have your product model number (TRTI189A778) and purchase details available when seeking support.
You can often find contact information on the official uxcell brand store or through your retailer.