

SINOCMP Universal Series O-Ring Assortment

SINOCMP Universal Series O-Ring Assortment User Manual

Model: 419 Pieces 32 Sizes Assortment

1. PRODUCT OVERVIEW

The SINOCMP 419 Pieces 32 Sizes Universal Series O-Ring Assortment is a comprehensive kit designed for various sealing applications. This assortment provides a wide range of O-ring sizes, making it suitable for automotive, industrial, and general household repairs. The O-rings are made from Hydrogenated Nitrile Butadiene (HNBR), also known as Highly Saturated Nitrile (HSN), a material known for its durability and resistance to extreme temperatures.

Key features include:

- Total of 419 O-rings in 32 different sizes.
- Constructed from high-quality HNBR (HSN) rubber for enhanced performance.
- Suitable for a wide range of applications including cars, doors, windows, electric appliances, bearings, pumps, and carrier rollers.
- Comes in a practical, resealable plastic case for organized storage and easy access.
- Designed for both professional and home use.



Figure 1: The SINOCMP 419-piece O-ring assortment, showcasing the red storage case with various O-ring sizes neatly organized.

2. SETUP AND PREPARATION

The O-ring assortment comes pre-organized in a durable, resealable plastic case. No assembly is required for the kit itself. Before use, ensure the work area is clean and free of debris to prevent contamination of the O-rings.

2.1 Inspecting the Assortment

Upon receiving the product, open the case and visually inspect the O-rings for any signs of damage, such as cracks, nicks, or deformities. While rare, manufacturing defects can occur. Ensure all O-rings are securely seated in their designated compartments within the case.



Figure 2: The O-ring assortment case opened flat, displaying the two halves with various O-ring sizes arranged in their respective compartments.

2.2 Understanding O-Ring Sizing

Each O-ring size is labeled within the case (e.g., R-01, R-02). Refer to the included size chart (often found on the lid or within the case) to identify the Inner Diameter (I/D) and Section (thickness) of each O-ring. Accurate sizing is critical for proper sealing.

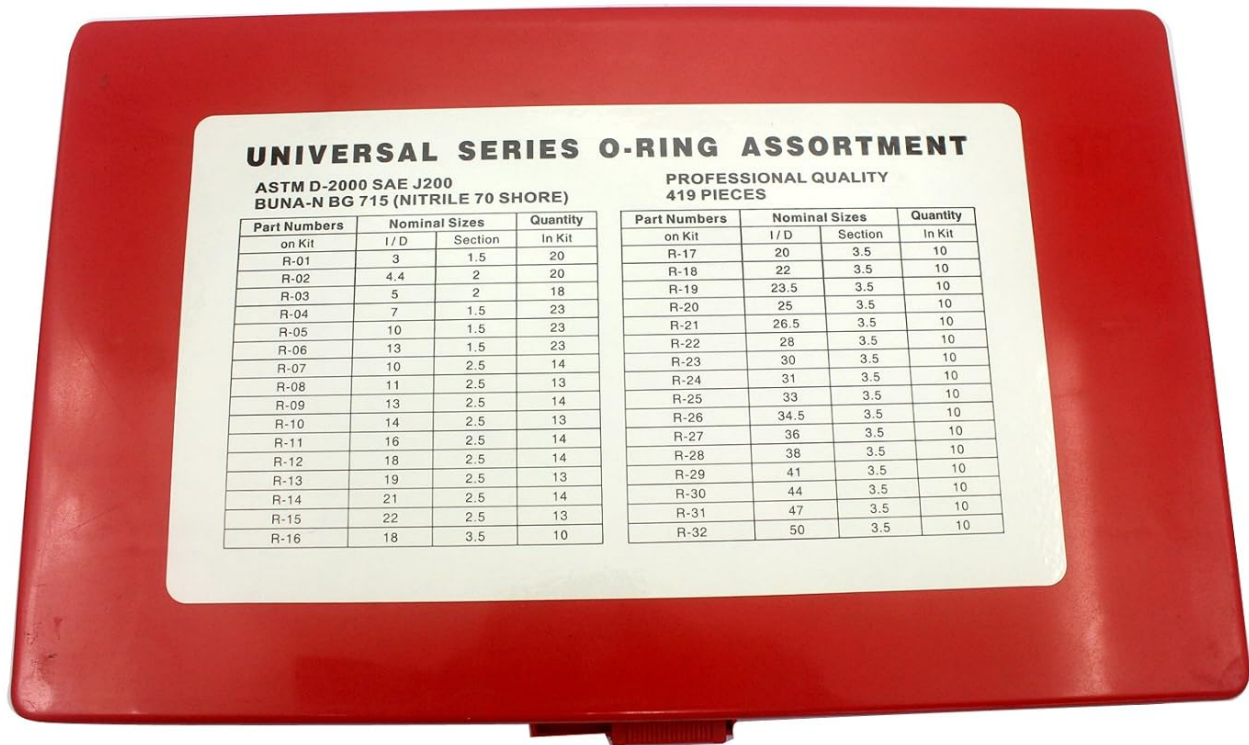


Figure 3: A close-up view of the O-ring size chart, typically found on the inside lid of the assortment case, detailing the part numbers, inner diameters, sections, and quantities for each O-ring size.

3. OPERATING INSTRUCTIONS

Using O-rings effectively requires careful selection and proper installation. The primary function of an O-ring is to create a seal at an interface, preventing leakage of fluids or gases.

3.1 Selecting the Correct O-Ring

- Determine Required Size:** Measure the groove or mating surface where the O-ring will be installed. Note both the inner diameter and the cross-sectional diameter (thickness) needed.
- Match from Assortment:** Refer to the size chart provided with the kit (see Figure 3) and select the O-ring that most closely matches your required dimensions. It is crucial that the O-ring fits snugly but without excessive stretching or compression.
- Consider Material:** The O-rings in this kit are made of HNBR, which is suitable for temperatures ranging from -45°C to 165°C. Ensure this material is compatible with the fluid/gas and temperature of your application.



Figure 4: A detailed view of the smaller O-rings within their compartments, highlighting the precision and organization of the assortment.

3.2 Installation Procedure

1. **Clean Surfaces:** Thoroughly clean the O-ring groove and mating surfaces. Remove any old O-ring material, dirt, or debris.
2. **Lubricate (Optional but Recommended):** Apply a thin layer of compatible lubricant (e.g., silicone grease, system fluid) to the O-ring and the groove. This aids in installation and can extend O-ring life.
3. **Install O-Ring:** Carefully place the O-ring into its groove. Avoid twisting or stretching the O-ring excessively during installation, as this can lead to premature failure.
4. **Assemble Components:** Gently bring the mating components together, ensuring the O-ring remains seated in its groove and is not pinched or extruded.



Figure 5: A close-up shot of the larger O-rings in the assortment, demonstrating their varying sizes and the organized layout within the storage case.



Figure 6: A selection of O-rings displayed outside the case, illustrating their circular form and the smooth texture of the HNBR material.

4. MAINTENANCE AND STORAGE

Proper maintenance and storage are essential to prolong the life and effectiveness of your O-rings.

4.1 O-Ring Care

- Avoid exposing O-rings to direct sunlight or strong UV light for extended periods, as this can degrade the rubber.
- Keep O-rings away from sharp objects or abrasive surfaces that could cause nicks or cuts.
- Do not store O-rings under tension or compression.

4.2 Storage

- Always return unused O-rings to their designated compartments in the resealable plastic case. This prevents loss, mix-up of sizes, and exposure to contaminants.
- Store the case in a cool, dry place, away from extreme temperatures, humidity, and direct chemical exposure.

- The case dimensions are approximately 20.5 x 10.3 x 3 cm (8.07" x 4.06" x 1.18"), making it compact for storage.

5. TROUBLESHOOTING

If you encounter issues with O-ring performance, consider the following common problems and solutions:

Problem	Possible Cause	Solution
Leakage after installation	Incorrect O-ring size (too small or too large), O-ring pinched/damaged during installation, contaminated groove, material incompatibility.	Verify O-ring size against specifications. Re-install carefully, ensuring no pinching. Clean groove thoroughly. Confirm HNBR material is suitable for application.
O-ring degradation (cracking, hardening)	Exposure to incompatible chemicals, excessive temperature, prolonged UV exposure, improper storage.	Ensure material compatibility with system fluids. Operate within specified temperature range. Store O-rings properly in their case, away from direct sunlight.
Difficulty installing O-ring	O-ring too large, insufficient lubrication, sharp edges on components.	Verify O-ring size. Apply compatible lubricant. Deburr any sharp edges on the components.

6. PRODUCT SPECIFICATIONS

Detailed specifications for the SINOCMP O-Ring Assortment:

- **Product Name:** SINOCMP 419 Pieces 32 Sizes Universal Series O-Ring Assortment
- **Material:** Hydrogenated Nitrile Butadiene (HNBR) / Highly Saturated Nitrile (HSN) Rubber
- **Color:** Black O-rings, Red storage case
- **Total Quantity:** 419 pieces
- **Number of Sizes:** 32 distinct sizes
- **Temperature Range:** -45°C to 165°C (-49°F to 329°F)
- **Case Dimensions (L x W x H):** Approximately 20.5 cm x 10.3 cm x 3 cm (8.07" x 4.06" x 1.18")
- **Product Weight:** Approximately 1.23 Pounds (0.56 kg)
- **ASTM Classification:** DH-type polymer (for HNBR)

6.1 O-Ring Size Breakdown (32 Sizes)

Part No.	I/D (mm)	Section (mm)	Quantity
R-01	3.18	3.65	20
R-02	4.4	2	20
R-03	5	2	18
R-04	7	1.5	23
R-05	10	1.5	23
R-06	13	1.5	23
R-07	10	2.5	14

Part No.	I/D (mm)	Section (mm)	Quantity
R-08	11	2.5	13
R-09	13	2.5	14
R-10	14	2.5	13
R-11	16	2.5	14
R-12	18	2.5	12
R-13	19	2.5	13
R-14	21	2.5	14
R-15	22	2.5	13
R-16	18	3.5	10
R-17	20	3.5	10
R-18	22	3.5	10
R-19	23.5	3.5	10
R-20	25	3.5	10
R-21	26.5	3.5	10
R-22	28	3.5	10
R-23	30	3.5	10
R-24	31	3.5	10
R-25	33	3.5	10
R-26	34.5	3.5	10
R-27	36	3.5	10
R-28	38	3.5	10
R-29	41	3.5	10
R-30	44	3.5	10
R-31	47	3.5	10
R-32	50	3.5	10

7. WARRANTY AND SUPPORT

Specific warranty information for the SINOCMP 419 Pieces 32 Sizes Universal Series O-Ring Assortment is not provided in the product data. For any inquiries regarding warranty, product support, or technical assistance, please contact the manufacturer directly.

Manufacturer: SINOCMP

You may also visit the [SINOCMP Store on Amazon](#) for additional product information or to contact their seller support.

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