



Film properties

| | | ASO Clean Resealable Bag in Standard Size AC-3 200mm×280mm | Measurement method |
|--|--------|---|---------------------------|
| Tensile strength [MPa] | MD | 43.1 | JIS Z-1702 |
| | TD | 34.7 | |
| Elongation [%] | MD | 73 | JIS Z-1702 |
| | TD | 72 | |
| Tear strength 4 sheets [N]* | MD | 0.40 | JIS K-7128-2 |
| | TD | 0.90 | |
| Seal strength [N/15mm] | Side | 36.3 | Our measurement method |
| | Bottom | 40.1 | |
| Oxygen gas permeability [ml/m ² ·d·MPa] | | 3382 | JIS K-7126-2 |
| Moisture permeability [g/m ² ·24h] | | 7.6 | JIS Z-0222 |

* The figures show measured values for four sheets laid one on top of the another.

The table shows measured, not guaranteed, values.

ASO Clean Resealable Bag in Standard Sizes



List of Standard Sizes of ASO Clean Resealable Bags

| Size No. | Size (mm) (Effective width x effective length below the zipper) | Quantity | Minimum quantity |
|----------|--|--|------------------|
| AC-1 | 100×170 | 1000 bags/case (50 bags × 20 packages) | 1 case |
| AC-2 | 140×200 | 500 bags/case (50 bags × 10 packages) | 1 case |
| AC-3 | 200×280 | 300 bags/case (50 bags × 6 packages) | 1 case |
| AC-4 | 240×320 | 300 bags/case (50 bags × 6 packages) | 1 case |
| AC-5 | 280×350 | 150 bags/case (30 bags × 5 packages) | 1 case |



Clean and Quality

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ASO ASO Co., Ltd.

ASO Clean Resealable Bag in Standard Sizes

“ASO Clean Resealable Bag in Standard Sizes” is a bag conforming to high cleanliness standards that is also resealable; something considered impossible previously. This product is a completely new type of resealable bag produced using a new processing method to ensure a very high level of cleanliness, making it suitable for use in the pharmaceutical and electronic device applications.



Packing style / outer package



ASO Clean Resealable Bag in Standard Sizes



Zipper

Test Items

| | | |
|-------------------------------|-----------------------------|--|
| Film in contact with contents | Food Sanitation Act (Japan) | Standards and criteria for food and food additives, etc. |
| | Japanese Pharmacopoeia | Polyethylene or polypropylene containers for aqueous injections. |

* Some of the above test contents are excerpted and tested.

Features

1. This product is produced in our ISO class 7 (class 10000) cleanroom. Dedusting of the both bag surfaces, which was previously impossible for resealable bags, is achieved using a new processing method making the product a “very clean resealable bag”.
2. The “completely additive-free polyethylene film” used in our “ASO Clean Poly Bag” product is used as the innermost layer of the bags that comes in contact with the contents. In addition, no adhesive is used to bond the plastic films so the product can be used without having to worry about contamination problems caused by additives or adhesives.
3. We can deliver this product by the case. As the product is packaged in very small packs of 30 to 50 bags, it can be carried in small quantities and unpacked and used when needed.
4. This product conducts tested of apparatuses and containers/packages made of synthetic resin (Standards and criteria for food and food additives, etc.) under the Food Sanitation Act, standards on pharmaceutical affairs essential for pharmaceutical packaging, and the “standard on polyethylene or polypropylene containers for aqueous injections” in the Japanese Pharmacopoeia.
5. This product is available in five standard sizes and is kept in stock. Upon your request, we can also deliver this product in gamma-ray sterilized form by the case.

Comparison of particles adhering to the inner surface of the bag

| ASO Clean Resealable Bag in Standard Size AC-3 200×280 | | | | | | | Laminated resealable bag (Ny/PE) 200×280 | | | | | | | | |
|---|----------------|-----|-----|-----|------|------|---|---------------|----------------|---------|--------|--------|-------|------|------|
| Particle size | | 2μm | 3μm | 5μm | 10μm | 25μm | 40μm | Particle size | | 2μm | 3μm | 5μm | 10μm | 25μm | 40μm |
| Blank water | Measured value | 0 | 0 | 0 | 0 | 0 | 0 | Blank water | Measured value | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | | | 0 | 0 | 0 | 0 | 0 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | | | 0 | 0 | 0 | 0 | 0 | 0 |
| | Maximum | 0 | 0 | 0 | 0 | 0 | 0 | Maximum | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Average | 0 | 0 | 0 | 0 | 0 | 0 | Average | 0 | 0 | 0 | 0 | 0 | 0 | |
| Minimum | 0 | 0 | 0 | 0 | 0 | 0 | Minimum | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Product | Measured value | 13 | 8 | 1 | 0 | 0 | 0 | Product | Measured value | 116,390 | 85,184 | 25,796 | 3,809 | 25 | 0 |
| | | 16 | 9 | 1 | 0 | 0 | 0 | | | 122,669 | 90,921 | 28,698 | 4,604 | 32 | 0 |
| | | 13 | 7 | 2 | 1 | 0 | 0 | | | 123,393 | 91,859 | 29,095 | 4,685 | 24 | 0 |
| | Maximum | 16 | 9 | 2 | 1 | 0 | 0 | Maximum | 123,393 | 91,859 | 29,095 | 4,685 | 32 | 0 | |
| | Average | 14 | 8 | 1 | 0 | 0 | 0 | Average | 120,817 | 89,321 | 27,863 | 4,366 | 27 | 0 | |
| Minimum | 13 | 7 | 1 | 0 | 0 | 0 | Minimum | 116,390 | 85,184 | 25,796 | 3,809 | 24 | 0 | | |

* The above figures are not guaranteed values but measured values.

Measurement method

The bag was filled with 100 mL of dust-free water with the blank count close to zero, and then tied at the top. Then 10 mL of the water was taken out of the bag and the number of particles in this sample was counted. This measurement was repeated three times and the average value calculated. The total counts are shown in the above tables.

* Measuring device: Particle counter from RION