

DESICCANT BAGS

PRODUCT OVERVIEW

WHS desiccant bags are engineered to protect semiconductor wafers, ICs, photomasks, and other moisture-sensitive components stored inside moisture barrier bags (MBBs). Each pack actively reduces relative humidity (RH) to safeguard devices against corrosion, oxidation, and contamination during storage and shipment. All WHS desiccant products are cleanroom-compatible and meet stringent semiconductor industry standards.



Products of interest:

- Cobalt Dichloride free humidity indicator card (WHS-B-HI001)
- Cobalt free indicator card (WHS-B-HI002)

KEY FEATURES

- **Available types**
 - Silica Gel: for general purpose drying in mid-to-high RH conditions.
 - Molecular Sieve (4Å): for deep drying below 10% RH
 - Bentonite Clay: cost effective, natural desiccant with strong adsorption at moderate RH
- **Packaging Material:** Cleanroom-grade, sulfur free Tyvek® (spunbonded polyethylene)
- **Adsorption capacity:** Up to 40% of the desiccant's weight, depending on type and environment.
- **Certifications & Compliance**
 - JEDEC J-STD-033, MIL-D-3464E Type I/II/III, DIN 55473.
 - Cleanroom compatible of ISO class 5+ environments.
- **Shelf life:** 2 years in original sealed packaging under recommended storage conditions.

RECOMMENDED APPLICATIONS

- **Wafer Handling:** Maintains a dry environment during silicon wafer storage.
- **Chip Packaging:** Shields ICs, dies, and SMDs inside MBBs.
- **Shipping Protection:** Prevents moisture-related failures during transit.
- **Long-Term Storage:** Ensures low-humidity conditions in vaults and dry boxes.

DESICCANT SELECTION GUIDELINES

- Molecular Sieve: <5% RH required
- Silica Gel: 20–40% RH range
- Bentonite Clay: Cost-sensitive applications

TECHNICAL SPECIFICATIONS			
parameter	Silica Gel	Molecular Sieve (4Å)	Bentonite Clay
Composition	Silicon Dioxide (SiO ₂)	Synthetic Zeolite	Natural Bentonite
Absorption Capacity	35% at 80% RH, 25°C	22% at 10% RH, 25°C	25% at 80% RH, 25°C
Operating Temp. Range	-40°C to 70°C	-40°C to 120°C	-20°C to 90°C
Moisture Removal Rate	15% wt. in 2 hrs at 40% RH	10% wt. in 2 hrs at 10% RH	10% wt. in 4 hrs at 40% RH
Particle size	1-4 mm	1-2 mm	1-4 mm

PERFORMANCE

Humidity Reduction: Reduces RH to <10% in 1 cu.ft. sealed enclosure within 8 hours (1 Unit bag, 25°C, initial 50% RH).

Moisture Absorption (per Unit):

- Silica Gel: 6 g at 40% RH; 3 g at 20% RH
- Molecular Sieve: 5.5 g at 10% RH
- Bentonite Clay: 6 g at 40% RH

SIZE & PACKING DETAILS

Current available size:

- 6g (60 × 60 mm)

The desiccant bags are sealed per 10pc and bagged per 100pc

Note: Custom sizes and configurations available upon request for specific packaging needs. Packing quantity and weight can change in bulk orders.

STORAGE & HANDLING

- Store sealed at 0-30°C, <75% RH.
- Limit exposure to ambient air to under 5 minutes before sealing in MBB.
- Recommended for use with WHS Humidity Indicator Cards (HICs).

ORDERING INFORMATION

WHS-B-	SG1006
CODE	MODEL
SG1006	Silica Gel
MS4006	Molecular Sieve
BC8006	Bentonite Clay

SAFETY & REFULATORY COMPLIANCE

- **Safe & Non-Toxic:** Chemically inert, RoHS-compliant materials.
- **Optional Certifications:** FDA 21 CFR for indirect food contact.
- **Disposal:** Classified as non-hazardous waste under most regional guidelines.

COMPLETE YOUR WAFER SHIPPING EQUIPMENT

Complete your wafer shipping equipment with the WHS-B Moisture Barrier Bags that are designed to provide superior protection for wafers and other electronic components during transport and storage.

WHS also offers a heavy-duty vacuum sealer designed to ensure airtight protection for moisture-sensitive products during storage or transit.



WHS-B Moisture Barrier Bag

WHS-B-S1000E Vacuum Sealer

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