



SMARTSTACK® HWS CANISTER 200 MM AND 150 MM

Safely protect and transport finished wafers in full, thin or ultra-thin thicknesses

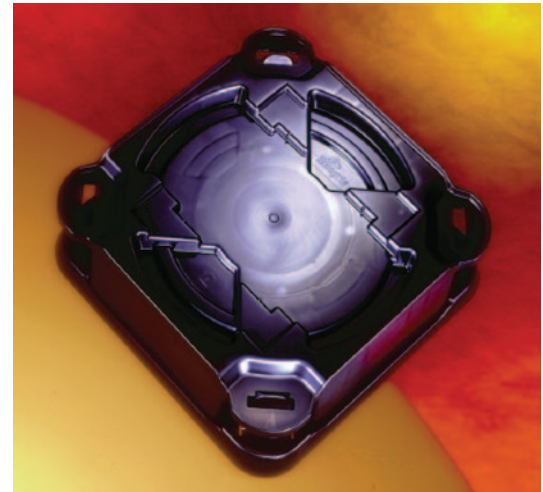
Overview

Advancements in wafer fab and chip assembly technologies have rendered obsolete many finished wafer packaging systems used to transport and ship delicate wafers. For example, decreasing line widths and die bond pad size demand low ionic/outgassing and reduced particles. Thin wafers needed for stacked IC and smart card applications add yet another level of complexity to handling and transporting delicate substrates. Both issues must be addressed in a robust shipper to keep yield rates high and increase productivity in both fab and assembly operations.

The SmartStack® HWS canister provides the necessary protection against ionic, outgassing and mechanical elements to maintain wafer integrity during transport, storage or shipping.

Features

- Accommodates 1 to 25 wafers
- Made from low ionic/outgassing STAT-PRO® 100M material for proven fab performance
- ESD safe for maximum wafer/device protection
- Ergonomic, easy to use, one-step open/close design mitigates factory environmental, health and safety (EHS) related issues
- Integrated machine interface features allow automated equipment to sense wafer size being packed/unpacked
- Design provides migration path from manual to automated wafer packing/unpacking
- Large lot ID and sidewall bar code label areas for maximum product identification and factory integration capabilities
- Order online at www.devicecare.com, with tools to help optimize your SmartStack system
- U.S. Patent: 6,550,619; foreign patents pending



Specifications

The SmartStack HWS200 and HWS150 canisters utilize an impact-resistant version of Entegris' fab proven STAT-PRO 100M polymer technology.

- Weight: 0.5 kg
- L × W × H: 226 mm × 226 mm × 70 mm
- Each canister is cleanroom-bagged
- Sold in full case quantity (24 per case)

Ordering Information

Part Number	Description	Wafer Size
HWS200-101A-61C02M	SmartStack HWS200	200 mm
HWS150-101-61C02M	SmartStack HWS150	150 mm

Physical Specifications

Property	Test Method	Units	Typical Values
Specific gravity	ASTM D-792	g/cc	0.97
Tensile strength	ASTM D-638	MPa	33.3
Tensile modulus	ASTM D-638	MPa	2,207
Tensile elongation	ASTM D-638	percent	9.7
Flexural modulus	ASTM D-790	MPa	2,069
Notched izod	ASTM D-256	J/m	42.4
Unnotched izod	ASTM D-256	J/m	742
Volume resistivity	ASTM D-257	ohms-cm	10 ¹ -10 ³
Surface resistivity	ASTM D-257	ohms/sq.	10 ³ -10 ⁸

The information on physical properties included in this document is based on our experience to date, and we believe it to be reliable. Data is obtained from specimens molded under controlled conditions from representative samples of the compound described. Properties may be affected by the molding techniques and by the size and shape of the item molded. We cannot guarantee favorable results and no assurances can be implied that all molded articles have the sample properties as those listed.

Organic Contamination Limits

Outgassing	<50 µg/g
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Ion Contamination Limits*

Fluoride (F)	<25
Chloride (Cl)	<80
Nitrate (NO ₃)	<25
Calcium (Ca)	<2000
Sulfate (SO ₄)	<250
Potassium (K)	<50
Phosphate (PO ₄)	<25
Sodium (Na)	<50
Magnesium (Mg)	<230

*Values are measured in ng/g

For More Information

Please call your Regional Customer Service Center today to learn what Entegris can do for you. Visit www.entegris.com and select the "Customer Service" link for the center nearest you.

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