



VAPORSORB™ EPI CHEMICAL FILTERS

Epitaxial (EPI) tool filtration solutions delivering complete protection against the full range of airborne molecular contaminants at 22 nm and below

Overview

As semiconductor process nodes have shrunk below 22 nm, the number of potential contaminants has increased, and the tolerable concentrations of those contaminants have decreased. It is necessary to protect both process equipment and wafers from the damaging effects of airborne molecular contamination.

Entegris tool AMC filters provide complete protection from common airborne molecular contamination (AMC) in the fab. Tool AMC filters utilize both standard filtration media and custom media blends to meet various AMC removal requirements. Entegris' vast fab expertise ensures the right selection, application and validation of solutions. In particular, Entegris has designed EPI tool AMC filters with a balanced media blend to target organic contaminants.

See It. Control It.

In an effort to deliver targeted solutions that control airborne molecular contamination, Entegris employs the data-driven *See it. Control it.* methodology.

SEE IT.

Measure AMC types and concentrations and monitor over time. Entegris is the only filter supplier with OEM-approved and ISO-accredited analytical laboratories.

CONTROL IT.

Remove AMC with targeted solutions. Entegris provides a full range of application-specific AMC filters to remove contaminants of concern.



Epitaxial AMC Concerns

AMC	Effect
Organics	Wafer haze

Practical Solutions for EPI Processes

VaporSorb™ EPI Chemical Filters can be configured to satisfy various installation requirements including tool-top, tool interface or in-tool housing in all equipment front-end modules (EFEMs) and process modules.

Features and Benefits

Features	Benefits
Data driven <i>See it. Control it.</i> methodology	Provides tailored, application-specific filtration solutions that are optimized for cost of ownership
Product backed by Entegris OEM-certified, ISO 17025-accredited laboratories	Provides assurance that all performance claims are verified with supporting data and in-field analytical support
Optimized blend of high-performance adsorbents	Provides targeted contaminant removal

Specifications

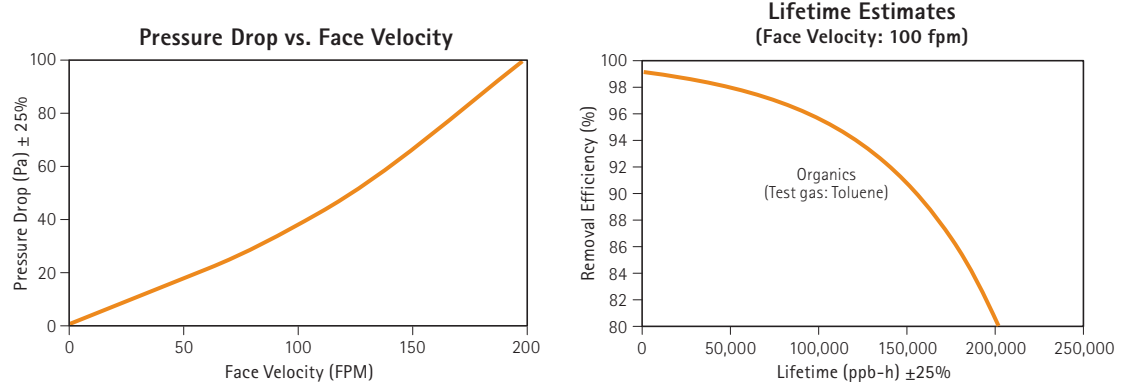
Materials

Casing:	Clear anodized aluminum
Media:	Application-specific blends of high performance adsorbents
Cover screens:	Clear anodized aluminum and polyester scrim
Gasket:	Closed cell polyethylene

Physical Performance

Parameter	At	Target
Air velocity distribution:	9 points 0.1 m downstream of filter @ 0.5 m/s face velocity	Uniform distribution, variation ~0
Temperature/humidity variation:	30–70% RH 18°C–35°C (64°F–95°F)	<10% service life degradation
Dust generation:	Particles per m ³	ISO 5-compliant
Metal contaminants:	None detected	<1 ng/L air

Performance Data



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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