

## MOLECULAR FILTER MEDIA



**Established in 1843, Hollingsworth & Vose Company is a global leader in the supply of technically advanced nonwoven and specialty papers used in electronics, battery, filtration, and industrial applications. H&V drives value in customers' products by inventing next-generation materials with superior performance. The company operates manufacturing sites and research centers in the Americas, Europe, and Asia.**

H&V's molecular filter media can combine molecular and particulate filtration in one revolutionary, patented filter technology for air and fluid filtration. Now filter manufacturers can remove and control odors, VOCs, toxic gases, and airborne pollutants to avoid health hazards and disruptions in technical processes. The material also offers reduced pressure drops and low initial breakthroughs.

Reducing pollution in medical, home, office, or cabin air environments has been a major challenge for the filtration industry. Pollution can disrupt technical processes, cause driver and passenger discomfort, and reduce productivity in office and industrial environments. In the past, filter manufacturers faced obstacles finding single layers of media that achieved specific particle retention levels. To remove both aerosols and harmful gas molecules and submicron particles in the lowest concentrations, manufacturers required more advanced filtration technologies.

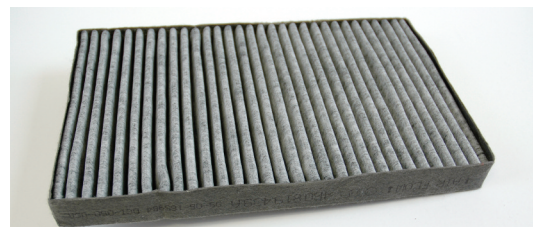
Molecular filter media, with H&V's unique patented technologies, combines particulate and gas-phase (molecular/chemical) filtration in one media to meet demanding indoor air quality and emissions standards. This filter technology platform provides a high degree of flexibility, allowing media adsorption and chemisorption performance to be tailored to specific environments.

### **Safe, sustainable, and energy-efficient**

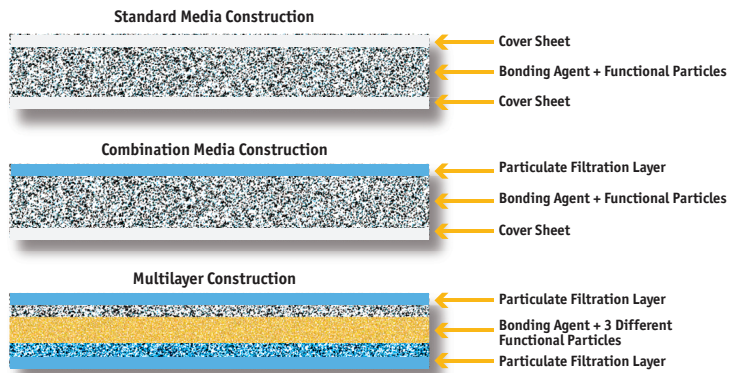
Molecular filter media technology can combine particulate and gas-phase (molecular) filtration in one media to remove odors and toxic gases, control corrosion, and collect airborne pollutants. It improves indoor air quality by removing gaseous contaminants including VOCs, SO<sub>x</sub>, NO<sub>x</sub>, formaldehydes, isooctanes, ozone, ammonia and amines, and benzene. At the same time, the media protects against pollen, soot, bacteria, industrial dust, and other breathable fine pollutants.

Molecular filter media technology offers filter manufacturers the following benefits:

- Excellent pleatability and processability
- Higher initial efficiencies
- Lower pressure drops and initial breakthroughs



### Media construction — dependent on application



### Applications

- Panel pleated filters
- Cabin air filters (combi filters)
- Engine air intake filters
- Extended surface filters
- V-bank filters
- Face masks
- Disk drive filters
- Military garments

### Standard adsorptive filter media for IAQ/HVAC/PPE applications — air filtration

Application	Floyd, U.S.A. Grade	Hatzfeld, Germany Grade	Removes
Indoor Air Quality/HVAC	A2220	5236V2	Wide range of odors in low concentrations and common air pollutants
Indoor Air Quality/HVAC	A2226	5236V2	Wide range of odors in low concentrations and common air pollutants. Grade includes a Merv 8/F5 particulate layer.
Indoor Air Quality/HVAC/ Clean Rooms	A2700	5327V284	Volatile organic compounds (VOCs), food and cooking odors, ozone, chlorines, adhesives, paints, detergents, pastes & glues, varnish fumes, plastics
Indoor Air Quality/HVAC/ Clean Rooms	A2703	5332V284	Vehicle exhaust, formaldehyde (HCOH) and aldehydes and sulfur compounds (H <sub>2</sub> S)
Indoor Air Quality/HVAC/ Clean Rooms	A2701	5331V284	Sulfur compounds H <sub>2</sub> S and SO <sub>2</sub> ; nitrogen oxides NO <sub>x</sub> , NO, and NO <sub>2</sub> ; smog; chlorine (swimming pool); acetic acid; bleaching solutions
Indoor Air Quality/HVAC/ Clean Rooms	A2702	5330V284	Ammonia and amines, bathroom odors, animal odors
Face Mask (EN149 FFP1SL with paraffin oil loading, FFP2SL without paraffin oil loading)	N/A	5316V267	Volatile organic compounds (VOCs), food and cooking odors, ozone, chlorines, adhesives, paints, detergents, pastes & glues, varnish fumes, plastics

\* Grades are available with higher-efficiency particulate layers. Please inquire for more information.



**Hollingsworth & Vose**

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### Standard adsorptive combi filter media for cabin air applications — air filtration

Application	Hatzfeld, Germany Grade	EfficiencyDust SAE Fine	EfficiencyDEHS	Initial Efficiency	DHC SAE fine	n-butane Capacity	SO2 Capacity	Toluene Capacity	Removes
OEM quality: high performance	5243V3	medium-high	medium-high	high	medium-high	high	medium	medium	Dust, pollen, soot, and other particles, as well as gases which are harmful to health such as fuels, nitrogen fuels, ozone, and other odorous substances
OEM quality: standard	5243V261	medium	medium	medium	medium	high	medium	medium	
OEM quality: high efficiency	5229274	high	medium	medium	medium-high	high	medium	medium	
Aftermarket: standard	5321V273	medium	medium	medium	medium	medium	medium	medium	

\* US grades will be sold under different grade numbers.

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