

# TECHNICAL DATA

Prepared by the Airguard Research and Technical Center



a CLARCOR company

## FILTER EFFICIENCY / APPLICATION GUIDELINES

Filter Efficiency Ratings			Application Guidelines		
MERV Rating (ASHRAE Std. 52.2)	Dust Spot Efficiency (ASHRAE Std. 52.1)	Arrestance (ASHRAE Std. 52.1)	Typical Contaminant	Typical Applications	Typical Air Filter
1	<20%	<65%	<b>&gt;10.0 µm Particle Size</b> Pollen Spanish moss Dust mites Sanding dust Spray paint dust Textile fibers Carpet fibers	Minimum filtration Residential Window air conditioners	<b>Throwaway</b> - Disposable fiberglass or synthetic panel filters <b>Washable</b> - Aluminum mesh, latex coated animal hair, or foam panel filters <b>Electrostatic</b> - Self charging (passive) woven polycarbonate panel filter
2	<20%	65-70%			
3	<20%	70-75%			
4	<20%	75-80%			
5	<20%	80-85%	<b>3.0-10.0 µm Particle Size</b> Mold Spores Hair spray Fabric protector Dusting aids Cement dust Pudding mix Snuff Powdered milk	Commercial buildings Better residential Industrial workplaces Paint booth inlet air	<b>Pleated Filters</b> - Disposable, extended surface, 25 to 125 mm (1 to 5 in.) thick with cotton-polyester blend media, cardboard frame. <b>Cartridge Filters</b> - Graded density viscous coated cube or pocket filters, synthetic media <b>Throwaway</b> - Disposable fiberglass or synthetic panel filters
6	<20%	85-90%			
7	25-30%	>90%			
8	30-35%	>90%			
9	40-45%	>90%	<b>1.0-3.0 µm Particle Size</b> Legionella Humidifier dust Lead dust Milled flour Coal dust Auto emissions Nebulizer drops Welding fumes	Superior residential Better commercial buildings Hospital laboratories	<b>Bag Filters</b> - Nonsupported (flexible) microfine fiberglass or synthetic media. 300 to 900 mm (12 to 36 in.) deep, 6 to 12 pockets. <b>Box Filters</b> - Rigid style cartridge filters 150 to 300 mm (6 to 12 in.) deep may use lofted (air laid) or paper (wet laid) media.
10	50-55%	>95%			
11	60-65%	>95%			
12	70-75%	>95%			
13	80-90%	>98%	<b>0.30-1.0 µm Particle Size</b> All bacteria Droplet nuclei (sneeze) Cooking oil Most smoke Insecticide dust Copier toner Most face powder Most paint pigments	Hospital inpatient care General Surgery Smoking lounges Superior commercial buildings	<b>Bag Filters</b> - Nonsupported (flexible) microfine fiberglass or synthetic media. 300 to 900 mm (12 to 36 in.) deep, 6 to 12 pockets. <b>Box Filters</b> - Rigid style cartridge filters 150 to 300 mm (6 to 12 in.) deep may use lofted (air laid) or paper (wet laid) media.
14	90-95%	>98%			
15	>95%	n/a			
16	n/a	n/a			
n/a	n/a	n/a	<b>≤0.30 µm Particle Size</b> Virus (unattached) Carbon dust Sea salt All combustion smoke Radon progeny	Cleanrooms Radioactive materials Pharmaceutical manufacturing Carcinogenic materials Orthopedic surgery	<b>HEPA/ULPA Filters</b> ≥99.97% efficiency on 0.30 µm particles, IEST Type A ≥99.99% efficiency on 0.30 µm particles, IEST Type C ≥99.999% efficiency on 0.30 µm particles, IEST Type D ≥99.999% efficiency on 0.10-0.20 µm particles, IEST Type F
n/a	n/a	n/a			
n/a	n/a	n/a			
n/a	n/a	n/a			

Source: ASHRAE Standard 52.2 - 1999