

Categorization of filter classes and particle sizes

Particle Size	Examples	Filter Class	Typical Applications
Coarse dust, particle size > 10 µm	<ul style="list-style-type: none"> - insects - textile fibres and hairs - sand - fly ash - spores, pollen - cement dust 	G 1	- simple applications (e.g. insect screens for compact machinery)
		G 2	
		G 3	- pre-filters and circulation filters for civil defense shelters
		G 4	<ul style="list-style-type: none"> - exhaust filters for spray painting booths, kitchens, etc. - inlet air filters for air conditioners and compact machines (e.g. window air conditioners, ventilators) - pre-filters for Filter Classes M6 to F8
Fine dust, particle size 1 - 10 µm	<ul style="list-style-type: none"> - pollen - spores - cement dust - fly ash - bacteria and germs on host particles 	M 5	- outside-air inlet filters for rooms with low purity requirements (e.g. factories, warehouse facilities, garages)
		M 5	- pre-filters and circulation filters in central ventilation stations
		M 6	- final filters for air conditioning of sales rooms, department stores, offices and certain production plants
		F 7	- pre-filters for Filter Classes F9 to E11
	<ul style="list-style-type: none"> - oil fumes and agglomerated soot - tobacco smoke - metallic-oxide smoke 	F 7	- final filters for air conditioning of offices, production plants, control centres, hospitals, EDP centres
		F 8	- pre-filters for filter classes E11 to H13 and activated carbon
		F 9	
Suspended particulates, particle size < 1 µm	<ul style="list-style-type: none"> - germs, bacteria, viruses - tobacco smoke - metallic-oxide smoke 	E 10	- final filters for rooms with high and highest purity requirements (e.g. for laboratories, for foods processing, pharmaceutical, fine mechanical, optical or electronics plants or medical facilities)
		E 11	
		E 12	
		E 11	- final filters for clean rooms, Classes 100,000 or 10,000
	<ul style="list-style-type: none"> - oil fumes and soot in nascent state - radioactive suspended particulates 	E 12	- final filters for clean rooms, Classes 10,000 or 100
		H 13	<ul style="list-style-type: none"> - final filters in civil defense shelters - exhaust air filters in nuclear plants
	<ul style="list-style-type: none"> - aerosols 	H 14	- final filters for clean rooms, Classes 10 or 1
		U 15	
	U 16		