



Categories of the dust filter

The classification of the application category „G“ and „C“ in correspondence with the dust classes “M” and “H” depends on the MAK-figures of the dust. The following table is elaborated by:TÜV Product Service GmbH / Staublabor

New categories for the dust technical evaluation of industrial vacuum systems, dedusters, sweep vacuum machines				
Former: ZH 1/487, BG-Holz, TRGS 519		suitable for:		Since 1/97: EN 60335-2-69, IEC 335-2-69
Application category	max. Admission rate		Dust class	max. Admission rate
U	0,05	- Dusts with MAK-figures > 1 mg/m³	L	0,01%
S	0,01	- Dusts with MAK-figures > 0,1mg/m³	M	0,001%
G	0,005	- Dusts with MAK-figures > 0,1mg/m³		
C	0,001	- Dusts with MAK-figures > 0,1mg/m³ and carcinogenic substances acc. § 35 GefStoffV		
G	0,005	- Dust with MAK-figures <= 0,1mg/m³	H	0,00005%
C	0,001	- Dusts with MAK-figures <= 0,1mg/m³ and carcinogenic substances acc. § 35 GefStoffV		
K1	0,0005	- carcinogenic dusts (§35 Gef Stoff V) incl. particularly dangerous carcinogenic substances acc. §15a GefStoffV		
K2	0,0005	- Dusts, who are contaminated with pathogenic		
Additional requirements	0,0005	- Asbestos	Additional requirements in Germany	Look H
B1 Germany	siehe entspr. Kategorie (S,G,C od. K)	- Explosive dusts, explosion class St1,St2, and St3 in Zone 11St1, St2, and St3 in Zone 11	B1 (BRD)	Look at corresponding dust class(M or H)
H2 Germany	0,2mg (wood) per m³ (air)	- Holzstaub (*)	M	0,001%

(*) in Germany over 1200W and/or 50 liter of the dust collecting vessel category B1 is required

MAK: Maximum workplace load

The MAK-figure is the maximum concentration of a toxic substance in the air at the working place.

Integrated separation rate* for MPPS	EN 1822
> 85%	H 10
> 95%	H 11
> 99,5%	H 12
> 99,95%	H 13
> 99,995%	H 14
> 99,9995%	U 15
> 99,99995%	U 16
> 99,999995%	U 17

Classification for HEPA- and ULPA-Filters

**The integral rate of separation is the average value of all over the surface of the filter measured separation rates.

**The size of the particle is called MPPS (Most Penetrating Particle Size), when the medium shows the lowest separation rate.

Clean room-classification

Maximum of the particle concentration (particle per m³ air) equal or higher as the considered Particle diameter

ISO Classification EN 14644-1	VDI 2083	US-Fed. Std. 209	separation rate	0,1 µm	0,2 µm	0,3 µm	0,5µm	1 µm	5 µm
Class 1				10	2				
Class 2				100	24	10	4		
Class 3			99,999995	1.000	237	102	35	8	
Class 4	1	1	99,99995	10.000	2.370	1.020	352	83	
Class 5	2	10	99,9995	100.000	23.700	10.200	3.520	832	29
Class 6	3	100	99,995	1.000.000	237.000	102.000	35.200	8.320	293
Class 7	4	1.000					352.000	83.200	2.930
Class 8	5	10.000					3.520.000	832.000	29.300
Class 9	6	100.000					35.200.000	8.320.000	293.000