

Safely removing the hazardous substance dust

1

... By **EXTRACTION**



Use as a **dust extractor**

- to extract dusts at the source
- on all dust generating machines and equipment in material machining and processing.
- Air speed in hose at least 20 m/sec. -
- monitoring of the air volume flow with switching off of the dust generating machine and/or signal emission

2

... BY **SUCTION**



Use as **industrial vacuum cleaner**

- removing settled dust with an industrial vacuum cleaner on and in machines and production facilities, for cleaning floors, large areas, walls and ceilings.

Only uncompromising, regular cleaning ensures that settled dusts cannot fly up again and cause health risks.

This is why blowing off dust with compressed air is generally banned!

3

What's important for you:

- | | |
|---|---|
| <input type="checkbox"/> Safe extraction | <input type="checkbox"/> Correct disposal |
| <input type="checkbox"/> Dust-free emptying | <input type="checkbox"/> Customer services who work dust-free |

You can obtain information on existing guidelines and regulations from:
Your specialist for work safety and the technical monitoring specialists at the professional associations, the trade monitoring authorities and the TÜV.

We offer specialist advice and practical solutions on site:

Ruwac
Industriesauger GmbH

Westhoyeler Str. 25
49328 Melle-Riemsloh

Telefon: 0 52 26 - 98 30-0
Telefax: 0 52 26 - 98 30-44

web: www.ruwac.de
e-mail: ruwac@ruwac.de



14-500-002-02.2004

Dealing with dust safely

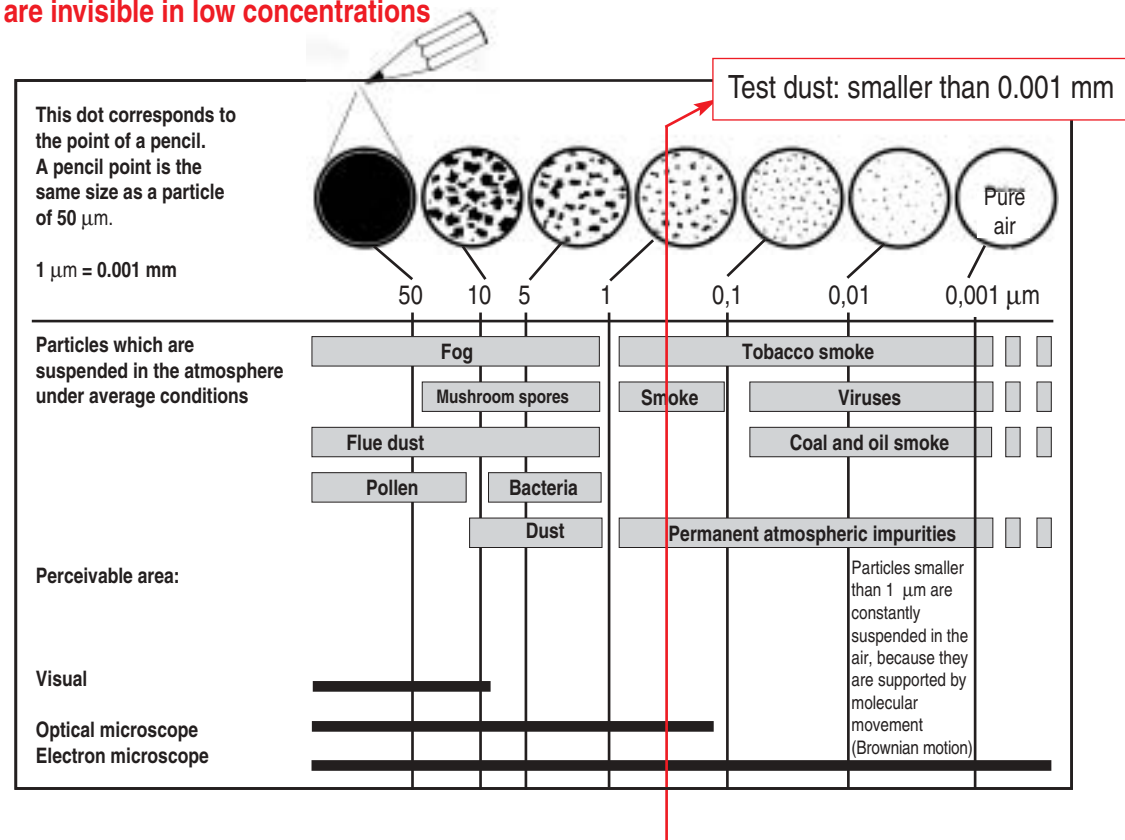


Expert Information from:

Ruwac
Industriesauger GmbH

What should you know about Dusts?

Most dusts are invisible in low concentrations

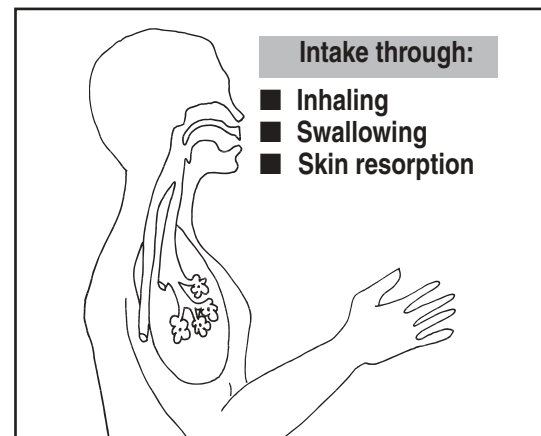


Dusts are everywhere

Inevitably, dusts are generated in places where products are machined and processed. Coarse dust settles quickly, but fine dusts float for a long time in the air we breathe. They can be inhaled deep into the lungs and deposited there. That's why in the long-term dust can damage the health of people in the workplace. The golden rule of work safety and health protection must apply for dust in the workplace:

"Avoid what can be avoided!"

How does dust enter the body?



Dust can be:

- annoying
- unpleasant
- destructive
- hazardous to health
- toxic
- carcinogenic

Dusts damage health due to their long-term effects!

What are the demands?

Health protection and work safety demand that dusts are reliably removed by extraction and suction. From the 1970's onward, the appliances used for this were tested and certified in Germany according to ZH 1/487. This standard was withdrawn in July 1997. The national provision was replaced by an internationally valid standard. **What has remained the same is that the most health-hazardous dust determines the required category of use/dust class.**

New dust classes for the dust related evaluation of industrial vacuum cleaners, dust extractors and sweeper-extractors

Suitable for dry dusts that are harmful to health and not flammable	Formerly: ZH 1/487		Now: DIN EN 60335-2-69 Anh. AA	
	Category of use	Maximum filtering grade	Dust class	Maximum filtering grade
with MWC values > 1 [mgm ⁻³]	At least U (S, G, C, K1, K2)	≤ 5%	At least L (M, H)	< 1%
with MWC values > 0,1 [mgm ⁻³]	At least S (G, C, K1, K2)	≤ 1%	At least M (H)	< 0,1%
with MWC values = 0,1 [mgm ⁻³]	At least G (C, K1, K2)	≤ 0,5%	At least M (H)	< 0,1%
with MWC values	At least G (C, K1, K2)	≤ 0,5%	H	< 0,005%
with MWC values + carcinogenic substances (§35 GefStoffV.)	At least C (K1, K2)	≤ 0,1%	H	< 0,005%
with MWC values + carcinogenic substances (§35 u.15a GefStoffV.)	K1, K2	≤ 0,05%	H	< 0,005%
with MWC values + carcinogenic substances (§35 u.15a GefStoffV.) incl. asbestos	K1, K2 + suitable for use according TRGS 519	≤ 0,005%	H + suitable for use according TRGS 519	< 0,005%
Also suitable for flammable dusts of all dust explosion classes (except dusts with extremely low minimum ignition energy ME < 1mJ)	At least S with B1 (additionally)		At least M with B1 (additionally)	

Source: Berufsgenossenschaftliches Institut für Arbeitssicherheit, Hauptverband der gewerblichen Berufsgenossenschaften 53754 Sankt Augustin - 08.2000

MAK (MWC) Value

Maximum workplace concentration (applies to gases, fumes and suspended particles)

BIA

Berufsgenossenschaftliches Institut für Arbeitssicherheit
Institution for safety at work established by the German employers' liability insurance association.

ZH 1/487

ZH: central agency for accident prevention. Series ZH 1 - rules and guidelines of the employers' liability insurance association. 487: "Equipment for the extraction of dust particles harmful to health with redirection of clean air to the work area"