

SAM FORRES

TLVs®

**THRESHOLD
LIMIT VALUES
and
BIOLOGICAL
EXPOSURE INDICES
for
1985-86**



American
Conference
of Governmental
Industrial Hygienists

CBY 3102517

C 000176

LAM022086

DUSTS

Substance	TLV-TWA
<u>SILICA, SiO₂</u>	
Crystalline	
‡ Quartz [14808-60-7]	In mppcf: 300 % quartz + 10 For respirable dust in mg/m ³ 10 mg/m ³ % Respirable quartz + 2 For "total dust," respirable and nonrespirable: 30 mg/m ³ % quartz + 3
‡ Cristobolite [14464-46-1]	Use one-half value calculated from the count or mass formulae for quartz.
* Silica, fused [60676-86-0]	0.1 mg/m ³ , Respirable dust
‡ Tridymite [15468-32-3]	Use one-half the value calculated from formulae for quartz.
* Tripoli [1317-95-9]	0.1 mg/m ³ of contained respirable quartz dust.
‡ Amorphous [7631-86-9]	(20 mppcf)
* ‡ Precipitated silica	‡(5 mg/m ³ , Respirable dust) *10 mg/m ³ , Total dust
* ‡ Silica gel	‡(5 mg/m ³ , Respirable dust) *10 mg/m ³ , Total dust

‡ SILICATES and OTHER DUSTS (< 1% quartz)

Asbestos ^(h)	0.5 fiber/cc. A1a
Amosite [12172-73-5]	2 fibers/cc. A1a
Chrysotile [12001-29-5]	0.2 fiber/cc. A1a
Crocidolite [12001-28-4]	2 fibers/cc. A1a
Other forms	2.5 mg/m ³ , Respirable dust
* ‡ Graphite (natural) [7782-42-5]	‡(5 mg/m ³ , Total dust)
‡ Mica [12001-25-2]	(20 mppcf)
Mineral wool fiber	10 mg/m ³
‡ Perlite	(30 mppcf)
‡ Portland cement	(30 mppcf)

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* Soapstone	3 mg/m ³ , Respirable dust 6 mg/m ³ , Total dust
Talc (containing no asbestos fibers) [14807-96-6]	2 mg/m ³ , Respirable dust
* Talc (containing asbestos fibers)	Use asbestos TLV. However, should not exceed 2 mg/m ³ respirable dust.

Nuisance particulates (see Appendix D):

‡ (30 mppcf) or 10 mg/m³ of total dust < 1% quartz, or, ‡(5 mg/m³ respirable dust.)

Conversion factors:

mppcf × 35.3 = Million particles per cubic meter
= Particles per cc

* ‡ COAL DUST

‡ (2 mg/m³ (respirable dust fraction < 5% quartz).
* If > 5% quartz, use respirable quartz value.

FOOTNOTES FOR DUSTS

- (h) Millions of particles per cubic foot of air, based on impinger samples counted by light-field technics.
(i) The percentage of quartz in the formula is the amount determined from airborne samples, except in those instances in which other methods have been shown to be applicable.
(j) Both concentration and percent quartz for the application of this limit are to be determined from the fraction passing a size-selector with the following characteristics:

Aerodynamic Diameter (μm) (unit density sphere)	% Passing Selector
≤ 2.0	90
2.5	75
3.5	50
5.0	25
10	0

(k) As determined by the membrane filter method at 400-450× magnification (4 mm objective) phase contrast illumination.

(l) Fibers longer than 5 μm and with an aspect ratio equal to or greater than 3:1.

‡(m) (Containing less than 1% quartz; if quartz content > 1%, use formulae for quartz.)

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