

TABLE 42-B THRESHOLD LIMIT VALUES FOR 1968 (Continued)

additive In the above example the limit for 20 per cent quartz is 10 mppcf

For another mixture of 25 per cent quartz 25 per cent amorphous silica and 50 per cent talc

$$TLV = \frac{1}{\frac{0.25}{2.5} + \frac{0.25}{20} + \frac{0.5}{20}} = 7.3 \text{ mppcf}$$

The limit for 25 per cent quartz approximates 8 mppcf

the factors have been pegged to the concentration in an inverse manner. It will be noted that as the magnitude of the TLV increases a correspondingly decreased range of fluctuation is permitted not to decrease the factor for TLV's of increasing magnitude would permit exposures to large absolute quantities, an undesirable condition, a condition that is minimized at low TLV's. Moreover, larger factors at the lower TLV's are consistent with the difficulties in analyzing and controlling trace quantities

100 + to 1000

1 25 Methyl chloroform- TLV 350ppm, at 438 ppm for periods not exceeding 15 minutes is not expected to result in untoward effects relating to category c. No 'C' listing recommended

PERMISSIBLE EXCURSIONS FOR TIME-WEIGHTED AVERAGE (TWA) LIMITS

As stated in the preface, the same factors may be used as guides for reasonable excursions above the time-weighted average applies. The time-weighted average implies that each excursion above the limit is compensated by a comparable excursion below the limit. Thus, a value of 6-ppm HF is permissible for periods not exceeding 15 minutes, provided an equivalent decrease below the limit of 3-ppm obtains

Appendix C

BASES FOR ASSIGNING LIMITING "C" VALUES

By definition in the Preface, a listed value bearing a "C" designation refers to 'ceiling' value that should not be exceeded, all values should fluctuate below the listed value. In general the bases for assigning or not assigning a "C" value rest on whether excursions of concentration above a proposed limit for periods up to 15 minutes may result in a) intolerable irritation, b) chronic, or irreversible tissue change, or c) narcosis of sufficient degree to increase accident proneness, impair self rescue or materially reduce work efficiency.

In order for the Committee to decide whether a substance is a candidate for a "C" listing, some guidelines must be formulated on the permissive fluctuation above the limit in terms of the seriousness of the response in the categories a, b, c, given above. For this the factors given in the table below have been used by the Committee. For both technical and practical reasons,

TLV RANGE
ppm or
mg/cu m

*Whichever
applicable
unit is

Test
TLV
Factor

Examples

0 to 1	3	Toluene diisocyanate- TLV, 0.02 ppm, if permitted to rise above 0.06 ppm may result in sensitization in a single subsequent exposure. "C" listing recommended on category b.
1 + to 10	2	Manganese- TLV, 5mg/cu m, contains little or no safety factor. All values should fluctuate below 5mg/cu m. "C" listing recommended on category b.
10 + to 100	1.5	Methyl styrene- TLV 100 if encountered at levels of 150 ppm will prove intensely irritating. "C" listing recommended on category a.

Appendix D

Some "Inert" or Nuisance Particulates*

Alundum (Al₂O₃)
Calcium carbonate
Cellulose
Portland Cement
Corundum (Al₂O₃)
Emery
Glycerin Mist
Graphite (synthetic)
Gypsum
Limestone
Magnesite
Marble