

## CEILING LIMIT

In addition to long-term (8-hour TWA) and short-term (15-min TWA) exposure limits, some authorities derived ceiling limits that are measured instantaneously. The ACGIH defines ceiling limits as the concentration that should not be exceeded during any part of the working exposure.

Ceiling limits are assigned to substances that are concentration-dependent rather than dose-dependent. Concentration-dependent chemicals are defined as fast-acting chemicals whose toxic effects are immediate and correlate more closely to concentration than dose. This category includes sensory irritants and chemicals that are corrosive or vesicant in their action. In contrast, the effects of dose-dependent chemicals are a function of both concentration and duration of exposure, and therefore longer averaging periods are used for dose-dependent exposure limits (15-min, 8-hour or 10-hour TWA).

The ceiling limit is the concentration that should not be exceeded during any part of the working exposure. If instantaneous monitoring is not feasible, then the ceiling shall be assessed as a 15-minute time-weighted average exposure. PID or FID detectors can be used to monitor peak exposures to vapours and gases. For particulates, real-time personal exposure dust monitors like HAZ-DUST 7204 or Respicon TM can be utilised.

Source: "TLVs and BEIs 2019" by ACGIH.

#Health #Safety #Exposure #IH #OH

