ESIS Environmental Health Lab

2009 ACGIH TLV Updates

The 2009 ACGIH Threshold Limit Values have been published and we would like to highlight some major changes. There were significant TLV changes for Beryllium (40x reduction) and Sulfur Dioxide (20x reduction). These, and a few other changes of more commonly used chemicals, are discussed below.

Beryllium's TLV has been reduced from 0.002 mg/m^3 to 0.00005 mg/m^3 TWA. In addition, Beryllium is now to be measured as inhalable dust. In order to detect 50% of the new Beryllium TLV a 600 liter air volume is required. Vanadium also has been changed to an inhalable TLV from a respirable TLV. The TLV concentration remains the same at 0.05 mg/m^3 but the TLV is now reported as Vanadium where it was previously reported as Vanadium Pentoxide.

The Ethanol TWA has been removed and has been replaced with a 1000 ppm STEL. Also, Sulfur Dioxide now only has a STEL. This removes Sulfur Dioxide's TWA of 2 ppm and reduces the old STEL of 5 ppm to a new STEL of 0.25 ppm. In order to detect 50% of the new STEL for Sulfur Dioxide a 6 liter air volume is required.

TLV's for VM&P naphtha and rubber solvent (naphtha) have been removed from the TLV booklet and replaced with Appendix H. Appendix H is a reciprocal calculation method for certain refined hydrocarbon solvent mixtures. For alphatic type mixtures the new TLV will be between 1200-1500 mg/m^3 depending on the exact composition. The 2008 TLV for VM&P Naphtha had been 300 ppm (1400 mg/m^3) so there essentially is no change. For mixtures containing alphatics and aromatics, a formula found in Appendix H is used to calculate the TLV of the mixture.
Appendix H can be used by the manufacturer of the chemical mixture or it could be determined using GC/MS analysis of the material. Note that the Stoddard solvent (mineral spirits) TLV of 100 ppm (570 mg/m^3) remains the same.

ESIS EHL

QUICK LINKS

Canister Services

Canister Overview

LEED Services

Metals Scans

Mold Services

Mold Interpretation

Sampling Manual

ESIS EHL

100 Sebethe Drive
Suite A5
Cromwell, CT 06416

860-635-6475
800-243-4903

esis.com/rcs/ehlab

In addition, a few Notices of Intended Changes (NIC) for the 2010 TLV's have been suggested. Ethyl Benzene has an NIC of 50 ppm TWA versus the existing TWA of 100 ppm. Methyl Isobutyl Ketone (MIBK) has a NIC of 20 ppm TWA versus the existing TWA of 50 ppm. The suggestion for Manganese is to change the existing standard from total Manganese of 0.2 mg/m^3 to an inhalable standard of 0.2 mg/m^3. Additionally, the NIC suggests a respirable Manganese TLV of 0.02 mg/m^3 TWA.

Suggestions or comments to these changes can be made by emailing science@acgih.org. Further information on current ACGIH TLV's and NIC's can be obtained by contacting www.acgih.org or calling 513-742-2020. Please call or email Jim Kenny with any other questions.

Sincerely,

Jim Kenny, CIH, CSP
Laboratory Manager