

Hexavalent Chromium Exposure Standard

The New OSHA Standard:

After more than ten (10) years of discussion and review, the Occupational Safety and Health Administration (OSHA) has changed the permissible exposure limit (PEL) for hexavalent chromium, Cr (VI), from 52 micrograms per cubic meter to 5 micrograms per cubic meter for an 8-hour TWA. Exposure below 2.5 micrograms per cubic meter has no compliance requirements. This change became effective **May 30, 2006**.

Compliance Concerns:

Monitoring for welding fume exposure is accomplished by drawing air from a worker's breathing zone through a filter. The filter is then analyzed at an AIHA accredited laboratory to determine the amount of hexavalent chromium to which the employee was exposed.

The Critical First Step:

Measure As Soon As Possible

As an employer, it is your responsibility to measure exposures in the workplace and take action, as needed, to provide a safe working environment. It is advisable that these measurements be taken by a qualified **industrial hygiene professional**. In this way, accurate measurements of exposure if any of your welders, in your workplace, using your welding conditions, in your working environment will be made. This information can then be used to determine what steps, if any, must be taken to protect welders from overexposure to Cr (VI).

If Personal Exposure is Above Permissible Limits:

Take Action

Protect the worker immediately, by whatever means necessary against overexposure to Cr (VI). Use the appropriate **personal protective equipment** while reviewing possible long-term changes that can be made to reduce hexavalent chromium levels in the work environment. Review your welding and cutting processes to determine if fume generation rates can be lowered or if it's possible to eliminate worker exposure. Consider automated welding and cutting processes, for example, which can help eliminate worker exposure entirely. If that's not possible, changing the gases and consumables being used may help. Also look for ways to improve general ventilation and consider the use of devices to remove fume at or near the arc. If needed, implement the use of personal protective equipment up to and including air-supplied respirators. After completing these steps, be sure to measure the effectiveness of your controls by monitoring exposure at the frequency specified in the OSHA Standard to ensure your workers are adequately protected.

The information contained in this summary is prepared for safety and health professionals and is for general informational purposes only. All readers are strongly cautioned that this document should not be relied upon as compliance or legal advice. Readers who wish to assure their compliance with the OSHA standard should review the Federal Register at Title 29 parts 1910.1026, 1915.1026 or 1910.1126 with qualified legal counsel, and should engage a qualified industrial hygienist.



For additional information, please refer to
OSHA's website at:
www.osha.gov/SLTC/hexavalentchromium/



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