

The State of California Adopts a Permissible Exposure Limit (PEL) of 0.2 f/cc for Refractory Ceramic Fiber (RCF)

Questions & Answers

Is this a ban on RCF?

No – The Refractory Ceramic Fibers Coalition (RCFC), represented by senior management and technical staff from Thermal Ceramics and Unifrax, met with state occupational safety and health representatives and participated in the California Standards Board public hearing. At no time was this action characterized as a ban or leading to a ban on the continued use of RCF in California.

Is there new health related data that prompted this action?

No – This action was not triggered by new scientific data on the potential health hazards associated with RCF. Cal OSHA reviewed all existing data, which includes epidemiological studies that continue to demonstrate the absence of RCF related disease in people working with these products, and provided a detailed explanation of its reasoning which can be found at http://www.dir.ca.gov/oshsb/airborne_contaminants09.html.

When does this new law come into effect?

The California PEL will be effective on August 3, 2010.

What does this law mean for companies using RCF?

It means that on average, an employee's occupational exposure to airborne RCF must be limited to 0.2 fibers per cubic centimeter (f/cc) over an eight hour time-weighted average (8-hr. TWA). See the California Occupational Safety and Health Standards Board "Final Statement of Reasons" for further details (attached).

How can companies comply with this standard?

Respiratory protection is already the industry standard for all industrial furnace installation and removal projects. Industrial hygiene data gathered under RCFC's product stewardship program (PSP), has demonstrated that many RCF exposures already meet this standard and it will require hard work and attention to exposure data to bring all exposures down. Any users of RCF can contact their RCFC material supplier for assistance with understanding their employee exposures, for guidance on the use of respiratory protection, and for assistance with identification of engineered control technologies that might assist in lowering airborne personal exposures.

Will this standard be adopted by other states or Federal OSHA?

California often acts independently of Federal OSHA, while most states follow Federal standards. The RCFC's recommended exposure guideline (REG) of 0.5 f/cc (8-hr. TWA) is

supported by Federal OSHA under RCFC's PSP-HTW program and remains the standard in all other states. RCFC will continue to follow regulatory trends and pass that information on as it becomes available.

If you have been hearing anything *contrary* to the above, please contact your RCFC representative for further assistance. As always, the RCFC remains committed to assisting distributors and end users of RCF products with reducing and controlling exposures to airborne fiber through the industry's PSP.

Final Statement of Reasons
Occupational Safety and Health Standards Board
California Code of Regulations
TITLE 8: Division 1, Chapter 4, Subchapter 7, Group 16, Article 107,
Section 5155 of the General Industry Safety Orders
Airborne Contaminants (Pages 30-31)

The Standards Board would like to note that it applauds the RCF industry's support of research on the potential hazards of RCF, and the product stewardship effort of RCF producers. The RCF industry has collected exposure data under a quality assurance project plan designed in conjunction with Federal EPA. These data have been shared with the Division as well as U.S. Department of Labor and other interested regulators. These data show that, with the help of RCF producers, users have achieved average TWA exposures well below the voluntary limit of 0.5 f/cc and in most circumstances at or below the proposed PEL of 0.2 f/cc. Therefore, in light of the totality of evidence cited by ACGIH and NIOSH on the potential for RCF to cause or contribute to respiratory disease, the Standards Board believes that a PEL for refractory ceramic fiber of 0.2 f/cc is feasible and necessary to protect workers.

The Standards Board appreciates the concerns raised by RCFC that, although measurements of airborne exposure to RCF for some operations have averaged below 0.2 fibers/cc, the variability of the results indicates that employers cannot assume that a single sample on any particular day will always indicate an 8-hour TWA exposure that does not exceed this level. These employers will have the option of supplementing engineering controls with respirator use or finding ways to improve engineering controls.

The problem of variability in assessments of worker exposures has been a subject of active research and controversy since the 1970's. The comments made by RCFC have highlighted this issue. The Division has determined that the time has come to confront the manner in which current enforcement approaches are affected by variability in exposure assessment and has expressed a commitment to begin discussion of this issue publicly.

However, a third option appears warranted in connection with the permissible exposure limit for RCF. In a workplace where it appears all feasible engineering controls for RCF have been implemented but the employer is not statistically certain that an individual sample result will never exceed 0.2 fibers/cc: In recognition of the commonly encountered high variability of airborne personal sampling results and the narrow interpretive value of a single sample with respect to overall employee exposure in a work environment, the Division has indicated that it will explore utilization of an enforcement strategy designed to promote (1) robust and proactive sampling by employers before they are targeted for enforcement inspections and (2) better characterization of mean exposures employees are experiencing in their work.

This approach would recognize that robust sampling strategies based on statistically driven, multiple-sample approaches and carried out in accordance with sound industrial hygiene practice and documentation, can allow for the drawing of significantly more competent and reliable conclusions about probable 8-hour TWA exposures than are possible with single-sample strategies. These types of sampling strategies are the subject of discussion in recent scientific literature.

In addition to promoting greater employer attention to making accurate conclusions about employee exposure, this kind of sampling and analysis would be better calculated to quantify the exposure environment in terms of the "working lifetime" principle embodied in Labor Code Section 144.6. One enforcement option consistent with this principle could allow an employer to demonstrate that, although individual samples may exceed 0.2 fibers/cc on occasion, it has reliably characterized 8-hour TWA exposure overall to be below 0.2 fibers/cc for workers in similar exposure scenarios, the Division would accept these results if the enforcing officer's own sampling on a single occasion indicates that the level of 0.5 fibers/cc has not been exceeded. This is not meant in any way to imply that the Division should refrain from using multiple sampling and statistical approaches where it chooses to develop them, but it is meant to promote utilization of the best information available to assess the actual exposure of workers for the purpose of compliance assessment.