

California Proposition 65 Labeling Requirements for Styrene Will Have Limited Impact on Expanded Polystyrene Foam

The EPS Industry Alliance (EPS-IA) has carefully assessed the need for labeling under the California Proposition 65 listing for styrene as it applies to expanded polystyrene (EPS) foam transport packaging and building insulation. Based on independent laboratory testing and calculations using OEHHA guidelines, we have concluded that exposure to consumers from the minor *residual* levels of styrene in expanded polystyrene foam are far below the benchmark being proposed by OEHHA and expanded polystyrene foam will not require labeling. EPS-IA is in the process of filing for a Safe Use Determination with OEHHA that would effectively exempt expanded polystyrene transport packaging, insulation and other products if approved by the agency following submission. The application will be filed in advance of the styrene listing implementation date of April 22, 2017.

The Safe Drinking Water and Toxic Enforcement Act of 1986, better known as Proposition 65, requires any business whose product can expose consumers in California to a chemical the state has determined as “known to cause cancer” to label their products with a warning about potential exposure. Proposition 65 requires the California EPA’s Office of Environmental Health Hazard Assessment (OEHHA) to maintain and update a list of chemicals known to the state to cause cancer.

CalEPA and the National Toxicology Program have been looking at styrene as a possible carcinogen for over ten years. Several large studies have found no link between styrene exposure and cancer in humans. However, one study suggested that a certain strain of mouse could develop a specific lung tumor at relatively low exposure levels. In 2014, the National Toxicology Program’s Report on Carcinogens classified styrene as *reasonably anticipated* to be a human carcinogen. In a legal challenge to the 2014 report evidence of irregularities in the data analysis and scientific evidence to establish that the particular mouse lung tumor could not biologically occur in humans was presented.

“We clearly stated this does not cover polystyrene.”

— Sam Delson, Deputy Director
External & Legislative Affairs
CA EPA Office of Environmental

Nonetheless, on April 22, 2016 OEHHA announced styrene would be listed as known to the state of California to cause cancer. This announcement was accompanied by a proposal to establish a no significant risk level (NSRL) for styrene exposure at

27µg/person/day. This has enabled the EPS Industry Alliance to conduct finite analysis that verifies exposure from residual styrene in expanded polystyrene products are significantly below the proposed NSRL.

“Let me put your mind at ease right away about Styrofoam. In finished products, certainly styrene is not an issue.”

Linda Birnbaum, Director of National Toxicology Program & National Institute of Environmental Health Services

Further, the National Toxicology Program, the American Cancer Society and even OEHHA have gone on record to clarify that the styrene listing should not to be confused with expanded polystyrene or other types of polystyrene.

What About Workbook Calculations?

Proposition 65 does not have its own standardized test methods so each chemical listed by OEHHA must employ test methods unique to its physical characteristics to determine exposure – and to what degree – in specific product applications. In

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Any decision regarding compliance with the requirements of Proposition 65 is the distinct responsibility of the merchant and/or distributor and although the EPS Industry Alliance believes the information in this communication is accurate and correct, the merchant and/or distributor should not and may not rely solely upon the statements of the EPS Industry Alliance in making a decision regarding compliance. Merchants and/or distributors are encouraged to consult counsel before making any decision regarding compliance.

In addition to conducting tests to measure the chemical content in consumer applications, industry segments often choose to develop a workbook that establishes baseline parameters that determine to what extent exposure to the chemical may be present. To evaluate whether the chemical exposure exceeds acceptable levels, a series of assumptions are made to establish what level of exposure would typically exist for air inhalation, dermal contact and ingestion (if applicable). A sum of the various exposure methods are combined and then compared to the No Significant Risk Level (NSRL) assigned to the chemical in question. These scenarios are presented in a workbook that outlines a methodical approach to risk/hazard assessment using OEHHA guidelines. EPS-IA has published a workbook of this nature, “Estimating Potential Exposure of Consumers to Styrene from Expanded Polystyrene (EPS) Products” to be used by its members in calculating styrene exposure resulting from expanded polystyrene foam products used by consumers.

Where’s the Data?

<i>Product</i>	<i>Inhalation</i>	<i>Dermal</i>	<i>Total</i>	<i>Proposed NSRL</i>
<i>End Cap</i>	0.101 µg/d	0.414 µg/d	0.515 µg/d	27 µg/d
<i>Produce Box</i>	0.214 µg/d	0.410 µg/d	0.624 µg/d	27 µg/d
<i>Insulation</i>	1.293 µg/d	0.436 µg/d	1.729 µg/d	27 µg/d
<i>Cooler</i>	0.172 µg/d	0.433 µg/d	0.605 µg/d	27 µg/d

EPS-IA used recognized test methods and conservative assumptions to determine potential exposure to styrene from four representative expanded polystyrene products using the EPS-IA Workbook. Using very conservative assumptions and data driven baseline parameters, the data demonstrates the potential exposure to residual styrene in expanded polystyrene products is magnitudes lower than the No Significant Risk Level proposed by OEHHA.

The Outcome?

The majority of expanded polystyrene foam applications used by consumers contain very low amounts of residual styrene and will not require labeling under California Proposition 65.

Need More Verification?

On March 13, 2017 the EPS Industry Alliance submitted a Safe Use Determination application to OEHHA requesting the agency officially recognize that the discharge or exposure to residual styrene found in expanded polystyrene products is at or below the No Significant Risk Level (also referred to as Safe Harbor Number).

If you have any further questions please contact the EPS Industry Alliance at (800) 607-3772 for assistance.

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