TPCH Finds Cadmium Continues to be Present in Flexible Polyvinyl Chloride (PVC) Packaging

PVC Packaging on US Retail Shelves May Violate State Laws

The Toxics in Packaging Clearinghouse (TPCH) released a report this week with an update on its testing of PVC packaging for compliance with state toxics in packaging laws.

The Toxics in Packaging Clearinghouse routinely screens packaging for the presence of regulated metals using x-ray fluorescence (XRF) analysis. “It’s the most effective way to educate manufacturers and distributors about state toxics in packaging laws,” according to TPCH Chair John Gilkeson of the Minnesota Pollution Control Agency. “Companies often assume they are in compliance with state laws because they have packaging specifications that require their suppliers to meet the applicable standards.”

Nineteen U.S. states, including California, have toxics in packaging laws that prohibit the intentional use and restrict the total concentration of four metals – lead, cadmium, mercury and hexavalent chromium – in packaging. These laws are intended to reduce the amount of heavy metals in recycling and municipal solid waste streams and prevent their release to the environment.

In 2015 TPCH initiated a screening project analyzing the regulated metals content of flexible PVC packages used for a variety of products such as home furnishings, pet supplies, and sporting goods. The results confirmed the continued presence of cadmium above legal limits in flexible PVC packaging, although both the concentrations and the overall rate of non-compliant packaging have decreased since 2006 in the limited sample populations tested by TPCH. TPCH did not find lead above legal limits in the flexible PVC packaging screened for this project.

19.2% of the packaging samples screened in 2015 exceeded the 100 ppm limit for the restricted metals in packaging upon initial XRF analysis.
The continuing presence of noncompliant packaging found in the marketplace demonstrates the need for continued monitoring of packaging components for compliance with state toxics in packaging laws. This is the responsibility of all companies in the packaging supply chain and product brand owners who select packaging and introduce packaging into the market in the U.S.

Lead and cadmium may be added to flexible PVC packaging as an inexpensive plasticizer or to inks and colorants to produce certain vibrant or longer-lasting colors. Although these substances may pose no threat to those handling the packaging, when the flexible PVC packaging material is disposed of in landfills or incinerators, these toxic metals can enter the environment and pose a risk to health and safety.

“Packaging manufacturers should be monitoring for compliance with state toxic in packaging laws,” stated Mr. Gilkeson. “Companies should ask their suppliers to provide a certificate of compliance for packaging and packaging components tested here in the U.S. for compliance with state laws. A small investment in testing will be less costly than removing packaging from retail shelves and the resultant damage to their brand.”

TPCH will continue to screen PVC and other types of packaging to assess compliance with state toxics in packaging laws.

For more information on state toxics in packaging laws, contact Melissa Walsh Innes, Toxics in Packaging Clearinghouse, at info@toxicsinpackaging.org or (802) 254-8911.

About the Toxics in Packaging Clearinghouse. The TPCH supports and helps coordinate the implementation of states' toxics in packaging laws. Nineteen U.S. states have toxics in packaging requirements. Nine states -- California, Connecticut, Iowa, Minnesota, New Hampshire, New Jersey, New York, Rhode Island, and Washington -- are members of the TPCH. The TPCH, which is administered by the Northeast Recycling Council, Inc. (NERC), serves as a central location for processing information requests from external constituencies and promoting compliance with the laws.