Management of solid waste can pose a wide range of hazards to public health and safety and to the environment. Packaging comprises a significant percentage of the overall solid waste stream. The presence of heavy metals in packaging is a part of the total concern in light of their likely presence in emissions or ash when packaging is incinerated, as well as the potential for those chemicals to leach into the water system when disposed of in a landfill.

**Toxics In Packaging Clearinghouse**

The Toxics in Packaging Clearinghouse (TPCH), established by the Coalition of Northeastern Governors (CONEG) in 1992, is a group of member states that have come together to regulate packaging based on the Model Toxics in Packaging Legislation. This model legislation has since been adopted on a much broader basis. While TPCH is no longer affiliated with CONEG, the legislation is still commonly referred to as the “CONEG packaging legislation.” The administration of TPCH is now handled by the Northeast Recycling Council, Inc. (NERC).

**Northeast Recycling Council (NERC)**

NERC is a multi-state nonprofit organization that promotes and manages environmental and sustainable solid waste management programs. NERC also provides support for other national programs: Toxics in Packaging Clearinghouse (TPCH), Electronics Recycling Coordination Clearinghouse (ERCC), State Electronics Challenge, and Organics Management Northeast Listserv.

**TPCH States**


States that have passed toxics in packaging legislation are eligible to apply for voting membership in the TPCH. Current state members with voting rights include: California, Connecticut, Iowa, Minnesota, New Hampshire, New Jersey, New York, Rhode Island, and Washington.

**TPCH Member States**

**Non-Member States With Legislation**

**States Without Legislation**

Source: Toxics in Packaging Clearinghouse 2016

**Model Toxics In Packaging Legislation**

**Heavy Metals**

TPCH calls for the reduction of four heavy metals present in packaging or packaging materials that are to be used or sold within the states adopting the legislation:

1. Lead (Pb)
2. Mercury (Hg)
3. Cadmium (Cd)
4. Hexavalent chromium (Hg)
This legislation prohibits the intentional introduction of these four heavy metals during the manufacturing of packaging or packaging components. Manufacturers and distributors of packaging or packaging materials are also required to reduce the total levels of these four heavy metals “incidentally introduced” to 100 parts per million (ppm) or less.

**Enforcement**
The entire supply chain is responsible for conforming with TPCH rules:
- Manufacturers of packaging and packaging components
- Suppliers of packaging and packaging components
- Product manufacturers or distributors who use packaging

Enforcement is managed on a state-by-state basis and most states have penalties established for violations. States share information through the clearing house “for the purpose of leading a coordinated effort on implementation and enforcement of the toxics in packaging legislation.” A comparative analysis between the model legislation and state laws is provided on the TPCH website.

**Packaging**
The definition of packaging under this legislation is broad and is stated in the legislation specifically as:
- “Package” means any container, produced either domestically or in a foreign country, providing a means of marketing, protecting, or handling a product, and shall include a unity package, an intermediate package, or a shipping container as defined in American Society of Testing and Materials (ASTM) specification D 996. “Package” shall also mean and include such unsealed receptacles as carrying cases, crates, cups, pails, rigid foil and other trays, wrappers and wrapping films, bags, and tubs.
- “Packaging Component” means any individually assembled part of a package which is produced either domestically or in a foreign country such as, but not limited to, any interior or exterior blocking, bracing, cushioning, weatherproofing, exterior strapping, coatings, closures, inks, and labels.

Common types of packaging include but are not limited to boxes, labels, tape, polybags, shrink wrap, styrofoam, bubble wrap, any type of filling, ink, or any type of print. The equation for total concentration limit of 100 ppm is based on whether an item is a single-component or multi-component package.

- Single-component package (ex: polybag): The concentration level, expressed in ppm, should be determined for each of the four metals and these numbers added together. This summation must be within the limit of 100 ppm.
- Multi-component package (ex: box/filling/polybag/tape): The four regulated metals are not summed or averaged across all packaging components that together comprise a package. Rather, the concentration level, expressed in ppm, should be individually determined for each metal and summed for each packaging component within the package. Each packaging component must comply individually with the legal limit of 100 ppm.

**Certificates of Compliance**
A certificate of compliance is a statement that a package or packaging component is in compliance with the requirements of this Act. The certificate must be signed by an authorized official of the manufacturing or supplying company. If compliance is achieved under the exemption(s), the certificate shall state the specific basis upon which the exemption is claimed.

According to the TPCH, the manufacturer or supplier of the package or packaging component must keep a copy of the certificate of compliance on file. Records retention requirements may differ from state to state. The TPCH recommends that the manufacturer or supplier retain the certificate of compliance for as long as the package or packaging component is in use by the purchaser of the package or packaging component.

Manufacturers and suppliers of packaging and packaging components are required to furnish a certificate of compliance to customers upon request. In this case, customers are the companies that actually put the products in the package. The retailer or the individual consumer are not considered customers under the terms of this act. The purchaser shall retain the certificate of compliance for as long as the package or packaging component is in use. Ultimately, it is the responsibility of the manufacturer and/or distributor of the packaging or packaging component to certify and provide the certificate of conformity.

**Exemptions**
Certain exemptions are incorporated into the TPCH and are listed here. Note that these exemptions vary by state and in some cases certain exemptions may no longer be in effect.
- Those package or packaging components that were manufactured prior to the effective date per state and per exemption.
- In the rare cases that those packages or packaging components to which lead, cadmium, mercury, or hexavalent chromium have been added in the manufacturing process in order to comply with health or safety requirements of federal law.
- Those packages or packaging components that would not exceed the maximum contaminant levels but for the addition of recycled materials.
- Those packages or packaging components to which lead,
cadmium, mercury, or hexavalent chromium have been added in the manufacturing process for which there is no feasible alternative.

- Those packages or packaging components that exceed the maximum concentration levels but are reused. This exemption expires January 1, 2020.
- Those packages or packaging components that exceed the maximum concentration levels but have a controlled distribution and reuse. This exemption expires January 1, 2020.
- Those packages or packaging components that are glass or ceramic and contain a vitrified decoration (ex: ceramics).

**What To Do**

**Packaging/Packaging Component Manufacturers/Distributors**

- Request certificates of compliance for each packaging component from your suppliers. Based on your suppliers’ certifications and your knowledge of your processing steps (that is, none of the regulated metals is intentionally added), you can prepare a certificate of compliance for your packaging.
- If that is not possible, the other option is to test your packaging for the presence of the regulated metals. Testing will indicate if the sum of the regulated metals is below 100 ppm.
- Upon completion of passing test reports, create and issue a certificate of compliance.
- Furnish the certificate to product manufacturers that request them.

**Manufacturers/Suppliers of Products in Packaging**

- Collaborate with the packaging supplier to begin dialogue regarding compliance to this requirement to ensure your production partner is able to meet these requirements.
- Ask for certificates of compliance from packaging suppliers.
- Maintain these certificates and be prepared to furnish them upon request.

**Distributors of Products with Packaging**

- Collaborate with the product suppliers and ensure that they are aware that you want to ensure compliance to this requirement.
- Ask for certificates of compliance from product suppliers.
- Maintain these certificates and be prepared to furnish them upon request.

**Global Influence**

The influence of the TPCH extends beyond U.S. borders. The European Union (EU) uses TPCH as the basis of its packaging requirements—Packaging and Packaging Waste (94/62/EC). The same four heavy metals are restricted in the EU at the same concentration levels as under the TPCH. The difference is that the EU directive does not have a requirement for “no intentional use,” making it a stricter requirement.

**ONLINE RESOURCES**

TPCH Website: http://toxicsinpackaging.org/

TPCH Fact Sheet: http://toxicsinpackaging.org/model-legislation/fact-sheet/


Model Toxics in Packaging Legislation: http://toxicsinpackaging.org/model-legislation/model/

Coalition of Northeastern Governors (CONEG): http://www.coneg.org/

Electronics Recycling Coordination Clearinghouse (ERCC): http://www.ecycleclearinghouse.org/

State electronics Challenge: https://nerc.org/projects/current-projects/state-electronics-challenge


PPAI Product Responsibility Summit: www.ppai.org/summit


TPCH Resource Page: http://toxicsinpackaging.org/resources/

TPCH FAQ: http://toxicsinpackaging.org/faqs/

Northeast Recycling Council (NERC): https://nerc.org/