Chlorinated Flame Retardants

Polyisocyanurate and spray polyurethane foam (SPF) are treated with a chlorinated flame retardant known as TCPP (tris 1-chloro-2-propyl phosphate). While not as much is known about the health impacts of TCPP as is known for HBCD, it is under study as a potential carcinogen by the Environmental Protection Agency. Polyiso contains 2.5–5.5 percent TCPP; SPF has 12.5 percent in open-cell applications, and 4 percent in closed cell.

How can this chemical affect my health?

Acute (Short Term) Effects

 Toxic to Humans & Animals – Can be fatal on contact, ingestion or inhalation for humans and other mammals.

Chronic (Long Term) Effects

 PBT (Persistent Bioaccumulative Toxicant) – Does not break down readily from natural processes, accumulates in organisms concentrating as it moves up the food chain, and is harmful in small quantities.

What are safer alternatives?

- **GOOD** – Limit use to specialty areas for SPF or polyiso, such as interior foundation walls.
- **BETTER** – Support efforts to change building codes to eliminate the need for flame retardants in insulation behind thermal barriers, as the chemicals do little to improve fire safety but can have serious health impacts.
- **BEST** – Consider other forms of insulation, such as rigid mineral wool, cellular glass or cementitious foam.

Effects detailed above can occur at various stages of the product’s lifetime, not just during usage. All have been included to provide a complete picture of the chemical’s danger.