

## **P39. WE ARE NOT AWARE OF THE DANGER THAT WE HOLD IN OUR HANDS: BPA IN THERMAL PAPER**

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Bisphenol A (BPA) is a monomer used in manufacturing most polycarbonate plastics, the majority of epoxy resins, and other chemical products. It is also used in a variety of consumer products, including some paper products, particularly thermal receipt papers, for which it is used as a color developer. There is a potential for occupational exposures during thermal paper manufacturing and product end-of-life (i.e., recycling, landfilling, or incineration). Additionally, there may be exposures to workers and consumers while thermal paper is being used and to the general population and the environment from releases during product manufacturing, use, and end-of-life.

Releases of free BPA monomers in thermal paper can occur upon contact with the paper and can be subsequently absorbed into the skin, leading to exposure during handling and use. Because BPA mimics the biological activity of estrogen, many scientists worry that the chemical might induce harm by disturbing hormone signaling in exposed individuals. Chlorinated BPA byproducts may be formed in secondary paper mills that use recycled thermal paper with BPA. Estrogenic activities of chlorinated derivatives of BPA were found to be relatively more potent than BPA. Most alternatives of BPA in thermal paper have Moderate or High hazard designations for human health or aquatic toxicity.

In Europe many countries have banned use of BPA in baby products such as baby bottles. Many companies have voluntarily decided to stop using BPA in their products. However, worldwide use of BPA in thermal paper is not restricted.