

Green Municipal Project

A Project of MASSPIRG and Toxics Action Center Safer Alternatives to PVC Plastic

The PVC Threat in Municipalities

PVC (Polyvinyl chloride) is widely considered to be the most environmentally damaging plastic produced. Unlike the plastics used in milk jugs and soda bottles, PVC (identified by the #3) is rarely recycled, because it contains so many additives.

PVC presents a toxic threat throughout its lifetime of production, use and disposal. When PVC is manufactured, the toxic chemical DIOXIN is a byproduct. There is considerable evidence linking the combustion of PVC, in incinerators or accidental fires, to dioxin formation. The EPA reports that trash incinerators are the leading source of dioxin- largely because of PVC in the trash.

Structural fires also are an increased hazard because of the use of PVC in construction. As noted by environmental officials in Germany, dioxin resulting from PVC "result in major problems for workers safety and high remediation costs in the wake of fires."

The Hazards of Dioxin

Dioxin has three properties that make it so dangerous. First, dioxin is an extremely "persistent" substance, meaning that it degrades very slowly in the environment. Second, dioxin bioaccumulates in the body fat of living things. Therefore, dioxin "travels up the food chain" in increasingly larger quantities. Thus grazing cattle store in the fat tissue the dioxin that settles from the air onto pastureland, leading to much larger quantities of the toxin in beef and milk. As a result, the EPA claims that over 90% of human exposure to dioxin occurs in food. Another tragic consequence is that nursing infants receive large doses of dioxin from their mother's milk. Third, dioxin has a broad range of health impacts, including cancer, reproductive and developmental disorders, and immune system damage. Dioxin is classified as a "known human carcinogen" by the International Agency for

Research on Cancer. In animal experiments and wildlife studies, dioxin exposure has been linked to endometriosis, lower sperm counts, decreased immune system response, as well as other health problems.

Municipalities Should Implement PVC

Alternatives

PVC is used in packaging, building materials, and consumer products. Government agencies and companies around the world are switching to the alternatives to this dangerous material. Over 200 communities in Europe have Policies to restrict or avoid use of PVC in construction projects.

Alternatives for PVC:

- 60% of PVC is used in construction, such as window frames, flooring, cables, and piping. Therefore, promote use of wood and aluminum for window frames; linoleum for flooring; chlorine-free plastics for cabling; steel, day, and chlorine-free plastics (such as HDPE or polyethylene) for piping.
- In packaging use the more recyclable PET plastic or glass.
- PVC is also found in office products ranging from pens to waste paper baskets. Instead promote wood, metal and other plastic products.

For more information on alternatives to PVC contact Eric Weltman, Toxics Action Center, (617) 292-4821, Paul Burns, MASSPIRG, (617) 292-4800