

Just How Hazardous Is Pentachlorophenol?

Pentachlorophenol, or penta, is currently banned in 26 countries around the world. It is a chlorinated aromatic hydrocarbon, which enables it to bioaccumulate in the human body, wildlife and the environment. Commercial grade penta is contaminated with polychlorinated dibenzo-p-dioxins (PCDDs), polychlorinated dibenzofurans (PCDFs), and hexachlorobenzene (HCB): three related chemicals, which are all recognized as carcinogens, mutagens, teratogens and endocrine disruptors.¹ EPA's newly released draft review of penta finds extraordinary risks associated with typical exposure that a child might experience in communities across the United States that are dotted with pentachlorophenol-treated utility poles. What makes these findings even more shocking is EPA's failure to consider the risks associated with exposure to any of the contaminant ingredients that go into the alphabet toxic soup that is penta. EPA says it will get to that in the near future.

Penta is acutely neurotoxic, i.e. short-term exposure can cause sickness or death; at least 30 cases of penta exposure have resulted in death. Symptoms of mild penta poisoning include stuffy nose, scratchy throat, and tearing of the eyes. Skin contact can produce contact dermatitis and chloracne. A person experiencing systemic poisoning by penta would show symptoms of profuse sweating and intense thirst, rapid breathing and heart rate, fever, abdominal pain, nausea, weakness, lack of coordination, dizziness, anorexia, and coma.²

Penta targets the liver, kidneys and central nervous system with toxic effects occurring at low doses. Autopsies of victims of fatal exposure to penta reveal changes in the brain, heart, kidneys, lungs, and liver.³

Chronic health effects from long term exposure to penta include: impairment of the immune system,⁴ interference with reproduction, birth defects,⁵ cancer,⁶ genetic mutation⁷ and hormonal problems.⁸ Clearly, penta is highly toxic.

Equally dangerous is that penta has been shown to be ubiquitous in the environment. A study in Arkansas found 100% of 197 ran-

domly selected, 2-6 year old children tested had penta in their urine.⁹ The National Health and Nutrition Examination Survey II (NHANES II) found penta in 79% of the general

U.S. population.¹⁰ A study of human milk samples provided by nursing mothers found that penta was present in all of the milk samples; there were no special, identified sources of penta exposure of the mothers.¹¹

The combination of high toxicity and widespread contamination dictates that EPA treat the wood uses of penta no differently than the nonwood uses banned in 1987. As a result, it would be prudent and responsible to cancel all remaining uses of this unnecessary poison.

The new data disclosed in this report raises troubling issues about the risks to children and utility workers from utility poles. The report challenges utility companies to seek out alternative utility pole materials that once and for all put an end to the need for pentachlorophenol.

Utility companies must develop policies that minimize the risk to the public and the environment and move

toward elimination of chemically treated wood utility poles.

Table I. Pentachlorophenol Is Banned in 26 Countries¹²

All uses prohibited by final regulatory action due to health or environmental hazards.

- Austria
- Benin
- Columbia
- Costa Rica
- Denmark
- Dominican Republic
- Egypt
- Germany
- Guatemala
- Hon Kong
- India
- Indonesia
- Italy
- Jamaica
- Korea
- Liechtenstein
- Luxembourg
- Malaysia
- Moldova
- Netherlands
- Nicaragua
- Panama
- Paraguay
- Sweden
- Taiwan
- Yemen