

What Is Tetrachloroethane?



- Tetrachloroethane (PCA) is a man made substance.
- Before the end of World War II (WWII), PCA was commonly used as an industrial solvent.
- Currently in the U.S., tetrachloroethane is used only as an ingredient in the production of other chemicals.

Tetrachloroethane has been found in at least 273 sites included on the Environmental Protection Agency's National Priorities List for clean-up action.

Properties

- Colorless liquid
- Sweet odor
- Does not burn easily
- Evaporates quickly

Uses Before WWII

- Industrial cleaner
- Solvent thinner in paints and varnishes – especially for airplane wings
- Chemical manufacturing
- Pesticide component



Distribution in the Environment

HISTORY

- Tetrachloroethane was the first chlorine-containing solvent produced in high quantities before World War I (WWI).
- Tetrachloroethane was used extensively as an industrial solvent until after WWII.
- Tetrachloroethane was gradually phased out as a solvent in the U.S. following WWII due to several documented cases of adverse health affects among exposed workers.



HOW TETRACHLOROETHANE GETS IN THE ENVIRONMENT

- *Released into the air*
- *Spills onto soil*
- *Disposal in old landfills*

TETRACHLOROETHANE IN THE ENVIRONMENT

- Does not attach to soil particles when spilled on the land or from past disposal in old landfills
- On land - either evaporates into the air or passes through the soil into water under the ground
- Breaks down slowly in air and water
- Does not build up significantly in the bodies of fish or other organisms.

Exposed Populations

HOW ARE PEOPLE EXPOSED TO TETRACHLOROETHANE?

- Breathing air in workplaces where tetrachloroethane is used/made
- Rare cases of drinking water from private, underground wells containing tetrachloroethane
- Breathing low levels in both indoor and outdoor air



TETRACHLOROETHANE IN THE BODY



- Tetrachloroethane enters the body when you breathe air or drink water containing it
- Tetrachloroethane can also enter the body through contact with the skin
- Most of the tetrachloroethane that enters the body is removed in exhaled air or urine within a few days

KNOWN HEALTH EFFECTS

- Short term exposure to high levels of tetrachloroethane in the air in a closed room can cause fatigue, vomiting, dizziness, and possibly unconsciousness.
- Long term exposure to large amounts can cause liver damage, stomach aches, and dizziness.
- Exposure to high doses of tetrachloroethane causes liver, kidney, and nervous system damage in laboratory animals.