

Toxic Tire Additive

What is 6PPD and 6PPD-q?

- 6PPD is an anti-wear chemical added to tires and other rubber-based products to increase tire life and prevent degradation. It is released as tiny particles from worn tires when they come in contact with the road.
- 6PPD-quinone (6PPD-q) is a toxic byproduct formed when 6PPD reacts with ozone in the air. It is highly lethal to Coho salmon and is toxic to several other fish species.

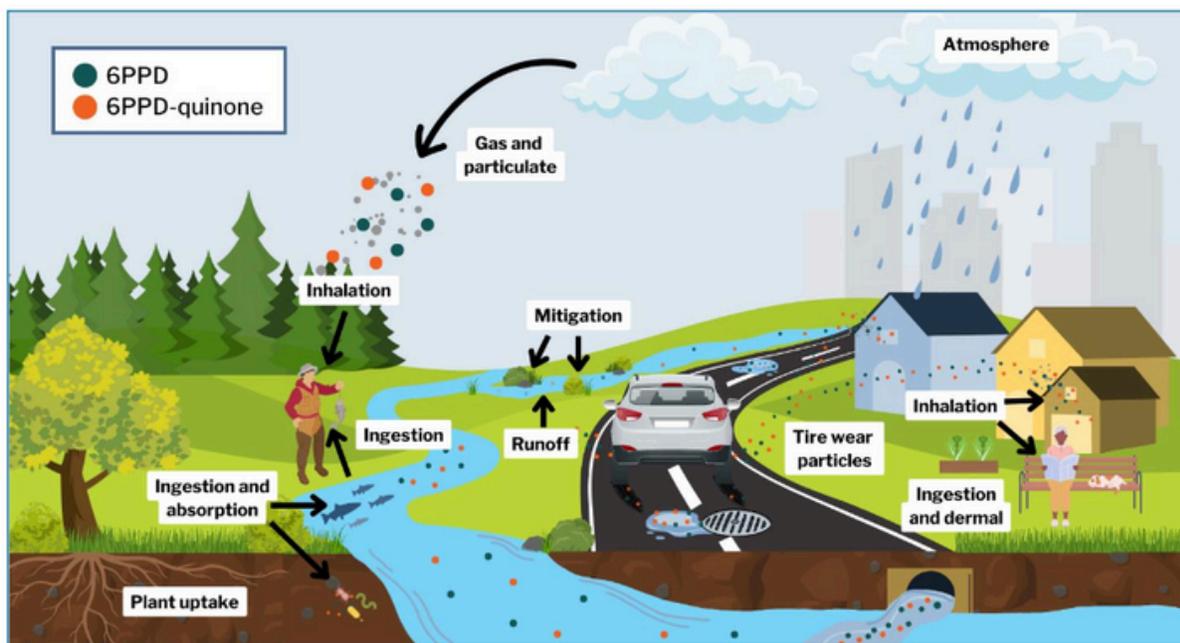
Why should I care?

- 6PPD-q is acutely toxic to fish, especially Coho salmon, where very low concentrations can be fatal.
- Research has also shown that 6PPD-quinone is damaging to mammals, including humans, with the chemical detected in human urine, blood, and cerebrospinal fluid. Human toxicity research is ongoing.

Conceptual Transport and Flow Model

This illustration shows how 6PPD and 6PPD-q are transported throughout the environment.

Figure credit: Interstate Technology & Regulatory Council, 6PPD & 6PPD-quinone Guidance Document, 2024 Used with permission.



What kind of action has been taken to address pollution?

- The [Washington State Department of Ecology](#) is studying the effects of 6PPD and 6PPD-q on aquatic ecosystems.
- The US EPA released [non-binding, non-regulatory screening levels for 6PPD-q](#) and [water testing methods](#) to help states and tribes protect sensitive fish species.
- The [California Department of Toxic Substances Control](#) is working with tire manufacturers to [find alternatives to 6PPD](#), although similar chemicals like 7PPD may pose similar risks.
- Humboldt Waterkeeper has begun sampling stormwater runoff around Humboldt Bay to identify 6PPD hotspots and inform stormwater management strategies.
- To learn more, check out the [Interstate Technology Regulatory Council's 6PPD Overview Page](#)