

## The Toxic Elements of Fireworks - Pick Your Poison

<u>Toxic Element</u>	<u>Fireworks Usage</u>	<u>Toxic Effect of Fallout Dust &amp; Fumes</u>
Aluminum	brilliant whites	Contact dermatitis, bioaccumulation
Antimony sulfide	glitter effects	Toxic smoke, possible carcinogen
Arsenic compounds	Used as colorants. Sadly still out there. <a href="#">[3]</a>	Toxic ash can cause lung cancer, skin irritation and wart formation.
Barium Nitrate	glittering greens	Poisonous. Fumes can irritate respiratory tract. Possible radioactive fallout. <a href="#">[4]</a>
Copper compounds	blues	Polychlorinated dioxins and dibenzofurans. <a href="#">[5]</a> Can bioaccumulate. Cancer risk.
Hexachlorobenzene (HCB) <a href="#">[5]</a>	Use was supposed to be banned globally.	Persistent environmental toxin. Is a carcinogen, mutagen and a reproductive hazard <a href="#">[13]</a> .
Lead Dioxide / Nitrate / Chloride	oxidizer	Bioaccumulation, developmental danger for kids & unborn babes, may remain airborne for days, poisonous to plants & animals
Lithium compounds	blazing reds	Toxic and irritating fumes when burned
Mercury (Mercurous chloride)	chlorine donor	Toxic heavy metal. Can bioaccumulate.
Nitric oxide	fireworks byproduct <a href="#">[6]</a>	Toxic by inhalation. Is a free radical
Nitrogen dioxide	fireworks byproduct <a href="#">[6]</a>	Highly toxic by inhalation. SIDS risk <a href="#">[8]</a> .
Ozone	fireworks byproduct <a href="#">[7]</a>	Greenhouse gas that attacks & irritates lungs
Perchlorate - Ammonium & Potassium	propellant / oxidizer	Can contaminate ground & surface waters, can cause thyroid problems in humans & animals
Potassium Nitrate	in black powder	Toxic dusts, carcinogenic sulfur-coal compounds
Strontium compounds	blazing reds	Can replace calcium in body. Strontium chloride is slightly toxic.
Sulfur Dioxide	gaseous byproduct of sulfur combustion	Acid rain from sulphuric acid affects water sources, vegetation & causes property damage. SIDS risk <a href="#">[8]</a> .

Provided by excerpts from the National Fire Protection Association (NFPA), 2007.