



Adverse Health Effects Associated with Chemicals Detected In and/or Released from PVC Shower Curtains

Volatile Organic Compounds (VOCs): VOCs are chemicals that easily turn into gases and contaminate our air. Some of these chemicals cause developmental damage as well as damage to the liver and central nervous, respiratory, and reproductive systems. Some can cause cancer in animals; some are suspected or known to cause cancer in humans. The table below summarizes the adverse health effects associated with the VOCs detected in the highest concentrations.

Volatile Organic Compound (VOC)	Adverse Health Effects
Cyclohexanone	Cataracts; respiratory irritant; nervous system depression; liver and kidney damage
Decane	Irritant (respiratory); nervous system depression; shortness of breath; narcotic effects
Dipropylene glycol methyl ether	Irritant (skin, eye, nose, throat); liver damage; narcotic effects
Ethanol, 2-(2-butoxyethoxy)*	Eye irritant; nervous system depression; kidney damage
Ethylbenzene	Irritant (skin, respiratory, eye); possible carcinogen; narcotic effects; nervous system disorders; liver damage; hematological disorders; may damage developing fetus
Methyl Isobutyl Ketone (MIBK)	Irritant (skin, respiratory, eye); nervous system depression; liver and kidney damage
Phenol	Mutagen; heart arrhythmia; pulmonary edema; depression (nervous system, cardiovascular system); liver and kidney damage
Toluene	Irritant (skin, nose, throat); developmental and reproductive toxicant; narcotic effects; nervous system disorders; liver and kidney effects
Undecane	Irritant (skin, respiratory, eye); shortness of breath
Xylene	Irritant (skin, eye, respiratory); narcotic effects; liver and kidney damage; brain effects; nervous system depression; may damage developing fetus

Phthalates: Phthalates are used to make PVC plastic soft and pliable – between 80-90% of all phthalates are used to soften PVC plastic products. Phthalates have been found in human

urine, blood, and breast milk. Some phthalates have been linked to reproductive problems including shorter pregnancy duration and premature breast development in girls, sperm damage and impaired reproductive development in males.

Organotins: Organotins are chemicals used as heat stabilizers in PVC. Some organotins affect the central nervous system, skin, liver, immune system and reproductive system.

See ***Volatile Vinyl – the New Shower Curtain’s Chemical Smell*** for references.