



United States
Environmental Protection
Agency

Questions and Answers for the Safe Management of PCBs in Caulking



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1. What are Polychlorinated Biphenyls (PCBs)?

PCBs are man-made chemicals that belong to a family of chemicals known as chlorinated hydrocarbons. PCBs were manufactured in the U.S. from 1929 until 1979, when their manufacture was banned due to concerns about their persistence, bioaccumulation, and potential for adverse effects on human health and the environment. Because PCBs are chemically stable with a high boiling point, and non-flammable with excellent electrical insulating properties, PCBs were used in hundreds of industrial and commercial applications including electrical, heat transfer and hydraulic equipment; as plasticizers in paints, plastics and rubber products (including caulk) and in many other industrial applications.

2. Why are PCBs in caulk?

At one time caulk was manufactured to contain PCBs because they imparted flexibility. PCB-containing caulk was used as a joint sealant in various architectural applications, including around windows and masonry expansion joints.

3. What are the health effects associated with PCBs?

PCBs have been demonstrated to cause a variety of adverse health effects. PCBs have been shown to cause cancer in animals, as well as a number of other health effects in animals, including on the immune system, reproductive system, nervous system, and endocrine system. However, what makes them of particular concern is their ability to persist in the environment and to bioaccumulate. Read more information on the health effects of PCBs at the following website: www.epa.gov/pcb.

4. Should I be concerned about PCBs in caulk?

Exposure may occur when there is contact with the caulk and any surrounding porous materials into which the PCBs may have been released (e.g., brick, concrete, wood). PCBs may also be released into the soil from exterior caulk, particularly as the caulk weathers, and there may be potential exposure for individuals who frequent adjacent play areas or gardens.

Caulk that is not intact and is peeling, brittle, cracking or deteriorating visibly in some way will have the highest potential for release of PCBs. Caulk would generally be characterized of lesser concern if it appears completely visually intact to the observer and does not have any signs of deterioration.



Foreground: Hamel, J. "PCBs in Common Building Material," Woodard & Curran, 2008. Background: Kraft, D. "PCBs in Caulk," EPA 2007 PCB National Meeting.

Indoor air quality may also be affected by PCBs from caulk to a limited extent. PCBs can slowly vaporize from caulk and be inhaled, and caulk dust particles can come into contact with people in the building and enter the air handling system, and move to other areas of the building.

Steps should be taken to minimize long-term exposures.



Kraft, D. "PCBs in Caulk," EPA 2007 PCB National Meeting.



Kraft, D. "PCBs in Caulk," EPA 2007 PCB National Meeting.

5. How do I know if I have PCBs in my school or building's caulk?

If you believe that caulk in your school or building was manufactured before 1978, when PCBs were banned, you may wish to have the caulk tested by a chemical analysis laboratory. Contact your Regional PCB Coordinator to find a testing laboratory in your area and to discuss the results and what they mean.

6. How can I reduce risk to children or occupants if my school or building has PCB-containing caulk?

If PCBs are found in the caulk, avoid regular touching of the caulk, clean it up properly and safely, and make plans to remove the caulk. The potential exposure to building occupants will be lower if they avoid areas where caulk may be present.

EPA is planning on evaluating potential Practical short-term options -- such as isolating the caulk by taping, sealing, or repainting -- that could reduce potential exposure.

In addition, when PCB-containing caulk is removed and disposed of, it must be done with care to avoid contamination of surrounding materials, such as floors, wood, bricks, mortar or soil.

7. What does my school or building have to do if we find PCBs in our caulk?

EPA recommends that owners and managers of buildings where PCBs are found in the caulk take steps to minimize exposure prior to removal of the caulk.

8. Where can I go for additional information?

Further information about PCBs and Regional points of contact can be found at www.epa.gov/pcb or you may contact the EPA's Toxic Substances Control Act Hotline at 202-554-1404.

This brochure is intended solely for guidance and should be used as an informal reference. It does not replace or supplant the requirements of the Toxic Substances Control Act or the PCB regulations at 40 C.F.R. part 761, and it is not binding on the Agency or individuals. Please refer to the regulations at 40 C.F.R. part 761 for specific requirements relating to PCBs and PCB-containing materials.



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