

PCB-Containing Fluorescent Light Ballasts

(adapted from EPA fact sheets)

Many buildings, including schools, have light ballasts that contain PCBs (polychlorinated biphenyls). The PCBs are in the light ballasts' capacitors and in the ballasts' potting material, which is used for insulation. *EPA recommends removal of all pre-1979 fluorescent light ballasts in schools to prevent accidental exposure of students, teachers, and other school personnel to PCBs through fires or leaks.*

EPA banned the manufacture of PCBs to the U.S. in 1979 because of their toxic effects. EPA also banned the processing or use of PCBs, except in totally enclosed equipment. However, many fluorescent light ballasts installed prior to these bans contain PCBs and are still in use. The typical working life of a fluorescent light ballast is 6 to 12 years. Remaining pre-1979 ballasts have been in use for over 30 years. Ballasts degrade or fail with age. This increases the risk of leaks and fires and creates health and environmental hazards.

The most likely way to become exposed to PCBs from light ballasts is to breathe contaminated air or touch PCB oil or PCB-contaminated materials after a ballast leak or fire.



EPA has classified all PCBs as probable human carcinogens (**cancer-causing substances**).

Other **long-term effects** can occur at any time after exposure and may last for months or years. They include: damage to the nervous and reproductive systems; immune system suppression; hormone disruption; respiratory tract symptoms; gastrointestinal and liver effects. **Short-term effects** include irritation of the skin and eyes such as chloracne and skin rashes. Infants of mothers exposed to PCBs can experience developmental effects impairing movement, visual recognition memory, and short term memory. PCBs may also be passed onto infants through their pregnant or nursing mothers.

If a ballast contains PCBs, the PCBs are located inside the small capacitor or in

the surrounding potting material. There will be approximately 1 to 1½ ounces of PCBs in the capacitor itself and smaller amounts in the potting compound, a black, tar-like substance on the internal electrical components.

**EPA:
If your school was built before 1979
and
your school has not had a complete lighting retrofit since 1979,
your lights ballast probably contain PCBs
and should be removed.**

PCB leaks from ballasts typically take 2 forms: a clear to yellow, oily liquid, the PCB oil itself, or the liquefied black potting material. If the ballast fails or overheats, the capacitor may break open and both the oil and the potting material may be released. The capacitor does not always leak when the ballast fails, but measures should be taken to limit or avoid personal exposure in all cases.

There is no reliable way to detect whether ballasts are leaking or about to catch fire by simply looking at a light fixture. Visible oil or black potting material or other staining do indicate a leak. The absence of such signs does not mean that the ballast is not leaking. In addition, there are no visible warning signs before a fire.

To properly inspect ballasts to determine whether they contain PCBs, it may be necessary to remove a portion of the fixture, such as the metal panel covering the ballast. In NYC public schools, this activity will be performed by an environmental vendor on an as-needed basis. However, inspection may not be necessary.

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recommends removal of all pre-1979
fluorescent light ballasts in schools to prevent
accidental exposure of students, teachers,
and other school personnel
to PCBs through fires or leaks.**