

Lead, nickel and allergenic scents in candles to be restricted

BfR opinion No 004/2014, 11 November 2013

Candles may contain substances with adverse health effects such as lead, nickel, allergenic scents and volatile organic compounds (VOC). These compounds are being released into ambient air and thus getting inhaled by consumers. For this reason, the German Federal Institute for Risk Assessment (BfR) has issued recommendations addressing EU-wide safety requirements for candles.

Lead-containing candles might affect the health of users. In children, lead has negative effects on the development of the nervous system, the brain and thus on cognitive development and intelligence. In adults, permanent and elevated lead exposure can damage the kidneys and provoke cancer. In candles, this heavy metal can be present in the wick to ensure an extended burning life, in the colour pigments and, as contamination, in the wax. When lead-containing candles are burned, the lead is released into ambient air and, after inhalation, might cause increased blood levels of this metal. Since children already ingest large quantities of lead through food, any additional lead intake should be avoided as far as possible. The BfR therefore recommends to ban the use of lead in all candle components.

Inhalation of nickel may cause cancer. For this reason, nickel should be reduced in candles to the lowest level technically achievable. From the health perspective a quantity of 0.6 nanograms (ng) of nickel per gram of candle should not be exceeded.

The use of allergenic scents in candles might cause adverse effect in consumers who are already sensitised against fragrances. In these persons, inhaling of such substances may provoke a “flare up” of an existing or developing contact eczema. Since scents do not fulfil a technology function in candles and numerous non-sensitising scents are available on the market, the BfR recommends that only those scents should be used in candles which are proven without any restrictions for cosmetic products or toys.

The full version of this BfR Information is available in German on <http://www.bfr.bund.de/cm/343/blei-nickel-und-allergene-duftstoffe-in-kerzen-sollten-begrenzt-werden.pdf>