

## Going green with new deo-blocks

As companies go green, there is a need to review some of the less obvious practices, such as deo-blocks that are used to 'sanitise' and 'deodorise' toilets, composed of 1.4 dichlorobenzene, commonly known as Para dichlorobenzene (PDB). A new South African product, P-Island and the Odorite Biocube offer a greener solution that is more effective.

By [Donovan Hawker](#) 24 Jul 2013



### PDB contamination

PDB is primarily used as a masking agent or deodoriser for urinals due to its nature as a volatile organic compound (VOC) and is detectable by its strong, pungent odour. However, this means that it merely masks the malodour, it does not clean or disinfect the urinal.

Exposure to PDB, even if acute or short-term, results in irritation of the skin, throat, nose and eyes. Exposure primarily occurs through the inhalation of contaminated air. According to Elliot et al (2006), there is a correlation between exposure to PDB and a decrease in lung function. Chronic or long-term exposure in humans may result in detrimental effects on the liver, skin and central nervous system. In addition, it is a proven endocrine disruptor, increases the risk of lesions on the nasal epithelium and increases chances of mild liver and kidney lesions.

Due to the mitogenic properties of PDB (also known as the threshold effect), the EPA has classified PDB a Group C, possible human carcinogen. The European Chemicals Agency (ECA) committee has also stated that, "the risks from the uses of 1.4-dichlorobenzene in air fresheners and toilet blocks are not adequately controlled." It has therefore implemented a restriction against the use of deo-blocks containing PDB due to the various health concerns.

More worryingly, contamination reaches far further than just the air. During the US FDA Total Diet Study, PDB was detected in a wide range of prepared foods. Of the 51 foods analysed, 29 had one or more samples of PDB at high levels. Further research was conducted in the UK, where fresh vegetables were purchased from retail outlets and tested for contamination by various chlorobenzenes. PDB was detected in 61% of the samples analysed.

It also has a negative impact on the environment. PDB is particularly hazardous to the aquatic environment and toxic to aquatic life. Its effect on birds was tested when 0.5% PDB was introduced to the diets of 10 Peking ducks for 35 days. After 28 days, three of the ducks had died and the survivors showed decreased growth rates. By exposing rainbow trout and zebra fish to water containing PDB, researchers pinpointed the 48-hour lethal toxicity level as 1.18 mg/L and 4.25 mg/L respectively.

### South African green breakthrough

When it comes to environmental and human safety and actual cleaning, biological products such as the Biocube and P-Island are far superior. These products work at the root of the cause of the malodour, rather than just masking the bad smell. Biological products make use of the surface cleaning action of surfactant and subtilis bacteria to remove more than 90% of bacteria, providing visually pleasing, sanitary and fragrant urinals.

With the world going green and the ever-raging battle for the environment and against cancer, it would be foolish not to consider the negative effects of this volatile compound. Green products are available, beneficial and safe - a definite step in the right direction.

An added advantage is the price factor, while a regular deo-block is only effective for 80 flushes, P-Island lasts for approximately 400.

For more information, go to [www.green-worxcs.co.za](http://www.green-worxcs.co.za).

## ABOUT THE AUTHOR

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