HEALTHY BUILDING NETWORK

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Proposition 65 Implementation
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Dear DARTIC Members:

We write on behalf of the Healthy Building Network to urge the DART IC to recognize bisphenol A (BPA) as a developmental and reproductive toxicant under Proposition 65.

While many are aware of the reproductive health concerns associated with BPA in baby bottles and/or food can liners, few are aware that BPA is a chemical component of epoxy resins used in building materials, including in high performance coatings (paints) and adhesives, which are widely used in buildings throughout the state of California. Emerging science regarding occupational exposure to epoxy resins made from BPA raises reproductive health concerns and makes clear that Prop 65 labeling is warranted to inform users of potential hazards.

Epoxy resin is used in building materials, often listed on a material safety data sheet as a proprietary mixture without disclosure that the resin is made from BPA. While manufacturers claim that BPA is consumed entirely in the production of epoxy resins and does not show up in the final product, scientists investigating the metabolic breakdown of epoxy resins during occupational exposure have found that epoxy resin products can be metabolized in the human body back into BPA and impact the reproductive system of those exposed.

A Japanese study of workers spraying the epoxy resin bisphenol A diglycidyl ether, otherwise known as BADGE (an epoxy resin found in paint coatings, adhesives, and food can liners), in a factory at least three hours per day found that BADGE may break down to BPA in the human body. Further, the researchers found that the bisphenol A may disrupt secretion of gonadotrophic hormones in men.[1] A similar study of workers applying paint consisting of 10-30% BADGE reported significantly higher urinary levels of total BPA and alterations in hormone levels in the exposed population. Painters had higher serum levels of luteinizing hormone (LH) and follicle-stimulating hormone (FSH) and lower levels of testosterone than non-painter controls.[2] A significant drop in testosterone levels in the painters is an early effect that must be considered adverse, since changes in testosterone production have consequences for the functioning of the reproductive and other systems.

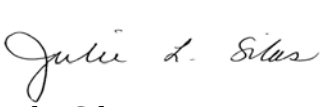
[1] Hanaoka T, Kawamura N, Hara K, Tsugane S. Urinary bisphenol A and plasma hormone solvents in male workers exposed to bisphenol A diglycidyl ether and mixed organic solvents, *Occupational and Environmental Medicine*, 2002; 59: 625- 628.
[2] Cha BS, Koh SB, Park JH, Eon A, Lee KM, and Choi HS. Influence of Occupational Exposure to Bisphenol A on the Sex Hormones of Male Epoxy Resin Painters. *Mol Cell Toxicol.* 2008; 4(3): 230-234. http://www.koreascience.or.kr/article/articleresultdetail.jsp?no=48542799&searchtype=JSB&listlen=13&listno=9. Accessed online June 4, 2009.

Scientific research has only recently begun to address potential exposures to BPA from building materials. Exposure from building materials is a concern, as identified in the May 2009 study, "Bisphenol A data in NHANES suggest longer than expected half-life, substantial nonfood exposure or both."[3] NHANES research indicates that OEHHA should be taking into consideration a wide range of exposure pathways, including from building materials as likely source of exposure to BPA impacting human health. Emerging information, such as the studies referenced above, indicates that workers exposed to epoxy resins metabolize the epoxy product into BPA with effects on hormone levels and the reproductive system.

The compounding evidence about BPA and its associated effects on the endocrine and reproductive systems and emerging science that products made from BPA are metabolizing into BPA in the human body and resulting in significant changes to the reproductive system indicate that the use of BPA in products exposes users to significant hazards. The Healthy Building Network urges the DARTIC to list BPA as a developmental and reproductive toxicant under Proposition 65 so that consumers can make informed choices about their potential exposure to this harmful chemical.

If you have any questions or concerns, please do not hesitate to contact us.

Sincerely,



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[3] Stahlhut R, Welshons W, Swan S. Bisphenol A data in NHANES suggest longer than expected half-life, substantial nonfood exposure, or both. *Environ. Health Perspect.* 2009; 117(5):784-789.

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