



In the post

House progress after Design Workshop—

We had our house design workshoped in *Sanctuary 19*. Carol Marra's comments gave us food for thought about how our design did not match some of the ideals we were hoping to include – such as size and complexity, and ease of access. Based on her suggestions, we have developed a new design, which more closely matches our ideals and fits with the design principles of the Arts EcoVillage. We've come up with a new design that is very exciting and unique, and is now being drawn up for submission to local council and the village.

Many thanks to all involved.

— Penny and Paul (SA)

Kinglake Earthship update—

We are building a fire resistant Earthship home from waste and recycled materials in Kinglake, Victoria, after the devastating bushfires of 2009.

We've now submitted all final documentation for the building of a Global Model Earthship. Our site has been excavated, weekend working bees have begun in earnest and our build will begin come spring.

If any *Sanctuary* readers are interested in registering to be involved in our Earthship build they're welcome to email: jonah@earthship.com Or, if they just want to help out at a weekend working bee please email me on: taylor.daryl.r@gmail.com

— Daryl (VIC)

On epoxy floor finishes—

I'm writing in response to an article published in *Sanctuary 18* titled '*Greener timber and concrete finishes*'. In this article, David Baggs of Ecospecifier was quoted as saying: "Bisphenol A (BPA) is one organic compound used in some epoxy resins that can migrate from within the base polymer via direct contact and has raised concerns amongst health experts, particularly in the context of floors where infants or toddlers may play."

We feel this quote is incorrect, that its publication in the article is misleading as it reflects only one side of the debate, and that it is not able to be substantiated.

I am not an official expert in this field, however I've been involved with the formulation, manufacture, application, training and troubleshooting of two-pack solventless epoxy systems for over 12 years. When this quote was published, I sought out the known facts on this matter because it appeared as though the quote was trying to link BPA concerns raised in consumer products such as baby bottles with a liquid-applied epoxy floor. I won't comment on baby bottles or the materials used for food containers, however I can comment on what I found in relation to two-pack epoxy floors and BPA. The points that I can confirm and/or establish are:

1. BPA is one of two components reacted together to form another stable polymer in the manufacture of liquid epoxy resins (called the 'base' or 'Part A'). The manufacturer of FLOORChef's liquid epoxy resins has stated that the theoretical free content of BPA is less than one part per million (ppm) in a typical 'base' composition.

2. In flooring applications like ours, the liquid epoxy resin ('base') is crosslinked with another polymer (called the 'cure', 'hardener' or 'Part B') to form a 'thermoset' solid and further dilute the concentration of any free BPA. This thermoset doesn't return to liquid form if heated.

3. A US EPA report on the risks of BPA (focused on food contact and the risks of BPA ingestion) states that epoxy resins are stable and it is only free BPA monomers that are able to leach out of the surface. The report is here: www.epa.gov/oppt/existingchemicals/pubs/actionplans/bpa_action_plan.pdf

4. The quote in the article refers specifically to interior epoxy flooring applications. Floors that are subject to normal, everyday usage, regular cleaning and are not designed to be food contact surfaces, ie food is not stored, heated or consumed off the coating.

5. Finally, as of 30 March 2012 the FDA rejected a proposed ban on BPA in food contact products. You can read their judgement here: www.americanchemistry.com/NRDC_Letter

With all of the above points in mind, I find it hard to believe there is any concern about the possibility of a solid material, with theoretical concentrations less than one ppm, migrating

out of a crosslinked epoxy floor to be absorbed through the skin of a toddler. I find it hard to believe and I found it hard to find supporting evidence to substantiate the very specific concern raised in the published quote from Mr Baggs.

I would like to add that I have only ever worked with two-pack solventless epoxy systems that contain no carcinogens, heavy metals or evaporative solvents. When it comes to indoor applications specifically, my primary concern has always been focused on Total Volatile Organic Compound (TVOC) emissions. Just for the record, independent tests show that the worst case FLOORChef TVOC emissions results are below 0.05 milligrams per square metre per hour – less than 1/10th of the international threshold for other floor coverings. If you would like a genuine alternative to timber, tiles, vinyl or carpet in your home then we strongly believe a FLOORChef floor is actually going to decrease the risks to your family.

— Jack Josephsen, Head FLOORChef

Thanks for your letter, Jack. We appreciate there are different views on the subject of BPA and that the view expressed by David Baggs from Ecospecifier is one of them. As the article stated, when choosing a finish for your floor, it is important to do your research to find the product that's right for you.

— Sarah, Sanctuary Editor

Write to us!

We welcome letters on any subject, whether it be something you have read in *Sanctuary*, an experience you've had as part of the green design or build process, or a great idea you would like to share. Please limit letters to 200 words. We can't guarantee we will publish all letters received and letters published may be edited for appropriateness, clarity and length.

Email letters to sanctuary@ata.org.au with your name and the state you live in.