

Greenlist Bulletin

From the Toxics Use Reduction Institute
at the University of Massachusetts Lowell

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This is the weekly bulletin of the TURI Library at the University of Massachusetts Lowell. Greenlist Bulletin provides previews of recent publications and websites relevant to reducing the use of toxic chemicals by industries, businesses, communities, individuals and government. You are welcome to send a message to mary@turi.org if you would like more information on any of the articles listed here, or if this email is not displaying properly.



Economics of Conversion to Mercury-Free Products

[Source: United Nations Environment Programme, October 26, 2011](#)

This Lowell Center for Sustainable Production report provides information from case studies of two firms involved with transitioning from mercury-containing to mercury-free products in the medical technology industry. One firm, American Diagnostic Corporation (ADC), is a manufacturer of diagnostic medical devices with operations in Hauppauge, New York, United States. The ADC study, which is more quantitative in nature, examines the company's experience with sphygmomanometers and digital thermometers. The other participating firm, Rayovac Hearing Aid Battery Division, is a manufacturer of miniature batteries for the hearing instrument market with plant operations in Portage, Wisconsin, USA and Washington, United Kingdom.

Access report [here](#).

Why is it So Difficult to Choose Safer Alternatives for Hazardous Chemicals?

[Source: Environmental Health Perspectives, July 2, 2012](#)

Author: Valerie J. Brown

The discovery of persistent, bioaccumulative, and toxic flame-retardant chemicals everywhere from animals north of the Arctic Circle to the breast milk of California women has been a cause for considerable concern. Alternative flame retardants were introduced to replace these chemicals, but investigators had not even produced the first empirical data on the substitutes' metabolic fate and toxicity before emerging evidence indicated they, like their predecessors, were accumulating rapidly in the environment. As the postmarket research continues, one wonders: Who, exactly, decides on the replacements for toxic chemicals, and on the basis of what criteria? And why does finding truly safer alternatives seem so difficult?

In Search of Safer Chemicals: The Case of Flame Retardants

The use of flame retardants in furniture ballooned after the 1975 implementation of California's Technical Bulletin 117 (TB117), which required foams used in upholstery to withstand a 12-second

exposure to a "candle-like" flame. Since then, many furniture manufacturers have chosen to make all their U.S.-sold products compliant with the standard rather than produce separate product streams for California and the rest of the country.

For many years polybrominated diphenyl ethers (PBDEs) were the flame retardants used most often to comply with standards such as TB117 for furniture and other standards for electronics and industrial textiles. But by 2003 it had become evident these chemicals are highly persistent and bioaccumulative in the environment, and studies were starting to report they may cause adverse health effects. In vitro and animal studies have associated various PBDEs with cancer, hormone disruption, reproductive problems, neurodevelopmental effects, and obesity. Associations have also been reported between PBDEs and metabolic syndrome and type 2 diabetes in humans. U.S. body burdens of PBDEs are as much as 10 times higher than those of Europeans. This is likely because the vast majority of the world's use of penta-BDE, a commercial flame retardant used chiefly in foam for furniture and mattresses, occurred in the Americas.

[Read more...](#)

[Read more... June 26 update on California's legislative hearings on furniture flame retardant standards.](#)

Naturally adhesive

[Source: Fraunhofer-Gesellschaft, July 2, 2012](#)

Shoes, cars, airplanes, rotor blades for wind turbines, self-adhesive notes, plasters - this is just a sample of the many products featuring adhesives. More than 820,000 tons of adhesive were produced in Germany in 2010, according to the German Adhesives Association - Industrieverband Klebstoffe. To this day the majority of adhesives are manufactured from petroleum-based materials. Only gradually is the industry also offering adhesives made from renewable raw materials such as starch, cellulose, dextrans, and proteins. Pioneering products featuring these new adhesives include wallpaper pastes and glue sticks.

Adhesive based on polylactic acid

In two projects, researchers at the Fraunhofer Institute for Environmental, Safety and Energy Technology UMSICHT are working on further new adhesive formulas based on renewable raw materials. In cooperation with the Recklinghausen site of the Westfälische Hochschule, University of Applied Sciences, and the companies Jowat, Logo tape, and Novamelt, and with support from Germany's Federal Ministry of Food, Agriculture and Consumer Protection, researchers at UMSICHT in Oberhausen are developing a pressure-sensitive adhesive for industrial applications. Products using pressure-sensitive adhesives include adhesive bandages, self-adhesive labels, and adhesive tapes. They are subject to particularly demanding requirements: They have to remain permanently adhesive at room temperature. Gentle pressure should suffice for them to adhere to almost all substrates, and yet it must be possible to remove them without leaving behind any residue. To achieve this, the adhesive force must precisely match the respective use.

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Phthalate, environmental chemical is linked to higher rates of childhood obesity

[Source: The Endocrine Society, June 26, 2012](#)

Obese children show greater exposure than nonobese children to a phthalate, a chemical used to soften plastics in some children's toys and many household products, according to a new study, which found that the obesity risk increases according to the level of the chemical found in the bloodstream. The study will be presented Saturday at The Endocrine Society's 94th Annual Meeting in Houston.

The chemical, di-ethylhexyl phthalate (DEHP), is a common type of phthalate, a group of industrial chemicals that are suspected endocrine disruptors, or hormone-altering agents.

In the study, children with the highest DEHP levels had nearly five times the odds of being obese compared with children who had the lowest DEHP levels, study co-author Mi Jung Park, MD,

PhD, said.

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How P2 can change the state of green manufacturing

[Source: GreenBiz, May 8, 2012](#)

Author: Anahita Williamson

When it comes to reducing the environmental impacts of a business, the concept of pollution prevention is one of the most fundamentally important ideas in the sustainability guidebook.

The basic concept is simple: Pollution prevention (P2) aims to reduce or eliminate waste at the source by changing production processes, using non-toxic or less-toxic substances, implementing conservation techniques, and reusing materials instead of putting them in the waste stream.

P2 is a methodology that is critical to a company's operations, and should be embedded in their strategic plan to streamline their manufacturing waste outputs and save costs and regulatory hassles at the same time.

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Stronger action urged after Maine DEP releases list of 49 chemicals dangerous to children

[Source: Bangor Daily News, July 5, 2012](#)


Author: Alex Barber

AUGUSTA, Maine -- The Maine Department of Environmental Protection has published a list of 49 chemicals whose everyday use it deems dangerous to the health of Maine children, but an environmental policy group is urging stronger action.

The DEP met a July 1 deadline set by the Legislature requiring it to adopt a list of up to 70 Chemicals of High Concern. The Maine Center for Disease Control and Prevention aided in compiling the list. The list follows last year's changes to the Kid Safe Products Act.

"We congratulate the Administration for taking these first, small steps toward safer products for Maine families," Sierra Fletcher, public affairs and policy director of the Environmental Health Strategy Center, said in a statement this week. "Now it's time to take great strides to protect the health of Maine's children. The State should require product makers to replace these dangerous chemicals with safer alternatives."

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