Greenlist Bulletin

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

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This is the bi-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.

A Hard Nut to Crack: Reducing Chemical Migration in Food-Contact Materials

Source: *Environmental Health Perspectives*, July 2015
Author: Nate Seltenrich

When we buy food, we're often buying packaging, too. From cherries to Cheez-It® crackers, modern foods are processed, transported, stored, and sold in specialized materials that account, on average, for half the cost of the item, according to Joseph Hotchkiss, a professor in Michigan State University's School of Packaging. Consumer-level food packaging serves a wide range of functions, such as providing product information, preventing spoilage, and protecting food during the journey from production to retail to pantry, fridge, or freezer. That's why food producers lavish so much time and money on it.

But what happens when these valuable and painstakingly engineered containers leach chemicals and other compounds into the food and drink they're designed to protect? Such contamination is nearly ubiquitous; it happens every day, everywhere packaged food is found, with all common types of packaging, including glass, metal, paper, and plastic.

Even as awareness of the issue grows, large-scale solutions that are scientifically and financially viable remain out of reach. The challenges in reaching them are many. Yet some of the world's leading health authorities and largest food producers are working toward fixes (and in cases already deploying them), despite the absence of scientific consensus or regulatory requirements around most food-packaging chemicals of concern.

Read more...

TURI's Note: TURI Affiliated Faculty member and past grantee, Professor Daniel Schmidt, from the UMass Lowell Plastics Engineering department, is featured in this article.

Study Questions Safety of Chemicals Used in Plastic Consumer Products

Source: *Medline Plus*, July 9, 2015
Author: Robert Preidt

THURSDAY, July 9, 2015 (HealthDay News) -- Two supposedly safer chemicals used to replace a known harmful one in plastic and other consumer products pose similar health risks, a new study contends.

The compounds di-isononyl phthalate (DINP) and di-isodecyl phthalate (DIDP) -- which belong to a class of chemicals known as phthalates -- are associated with increased risk of high blood pressure and diabetes in children and teens, researchers from NYU Langone Medical Center in New York City found.

The two chemicals are used during manufacturing to strengthen plastic wrap, soap, cosmetics and containers for processed foods. They are replacements for another chemical -- di-2-ethylhexylphthalate (DEHP) -- which was previously found to have similar harmful effects on human health, the researchers said.

"Our research adds to growing concerns that environmental chemicals might be independent contributors to insulin resistance, elevated blood pressure and other metabolic disorders," lead investigator Dr. Leonardo Trasande said in a medical center news release.

Read more...

See original study in *Hypertension*, "Association of Exposure to Di-2-Ethylhexylphthalate Replacements With Increased Blood Pressure in Children and Adolescents".

Also see study in the *Journal of Clinical Endocrinology & Metabolism*, "Association of Exposure to Di-2-Ethylhexylphthalate Replacements With Increased Insulin Resistance in Adolescents From NHANES 2009-2012".

Green asphalt? A plant-based compound may undo aging, boost recycling

Source: *The Boston Globe*, July 6, 2015
Author: Hiawatha Bray

There's nothing green about asphalt, unless you can make less of the stuff by more efficiently reusing the pavement we've already got.

The Warner Babcock Institute for Green Chemistry in Wilmington says it's found a way. The institute's new plant-based compound, Delta-S, rejuvenates worn-out asphalt so it mixes better with new paving material. With Delta-S, road builders can add a higher percentage of old asphalt to their new roads, which means lower cost and reduced consumption of the heavy, toxic petroleum found in fresh asphalt.

Read more...

"Flame Retardant-Free" Becoming the New Normal for Furniture

Source: Center for Environmental Health, July 1, 2015

Oakland, CA -- More than 50 furniture companies representing billions of dollars in annual sales are now selling products made without toxic flame retardant chemicals, according to buying guides released today by the Center for Environmental Health (CEH). Market leaders now offering safer furniture include Ashley, Ikea, La-Z-Boy and many others. Numerous studies have linked flame retardants to cancer, infertility, learning and developmental problems and other serious health issues.

CEH partnered with HDR Inc, the nation's second largest architectural and design firm, in surveying office furniture companies, and with the American Home Furnishings Alliance (AHFA) in surveying companies that make residential furniture. "Our guides show that safer products are now available for American families and businesses," said Michael Green, Executive Director of CEH. "We applaud the companies who are taking swift action to eliminate toxic flame retardants from their products, and we expect that the entire industry will soon be flame retardant-free."

The CEH guides show that 20 office furniture companies and 37 residential furniture companies representing almost 60 brands are offering furniture made without flame retardants. Companies are able to provide safer products as a result of recent changes to California flammability laws, which for

the first time in decades now gives companies easier ways to meet safety standards without the use of harmful flame retardants. For furniture made after 12/31/14, California also now requires labels to inform buyers when products contain toxic flame retardants, thanks to successful legislation (SB 1019) co-sponsored by CEH. According to the CEH surveys, approximately 75% of companies are labeling the furniture they sell nationwide.

Read more...

Access CEH guides here.

Echa proposes 15 substances for authorisation

Source: *ChemicalWatch*, July 2, 2015

Echa has recommended another batch of substances to the European Commission for authorisation.

The 15 recommended substances include four boron compounds and seven phthalate plasticisers, and were among the 19 the agency's Member State Committee recently agreed should go forward (CW 17 June 2015).

However, Echa decided that the four lead substances, also agreed for authorisation by the committee, should not be recommended to the Commission at this stage, but will instead be reconsidered "in the future".

Read more...

Also see from *Chemical Watch*, "RoHS exemptions proposed for lead and cadmium".

Menards joins other retailers in dropping products with toxic chemical

Source: *Milwaukee Journal Sentinel*, July 8, 2015
Author: Lee Bergquist

Menards said Wednesday it would stop selling vinyl flooring containing a toxic chemical -- an apparent response to a public-relations campaign to pressure the Eau Claire-based company to join other retailers and end its use of the product.

Menards said it planned to stop selling any products containing phthalates (pronounced "tha-layts") at its home improvement stores by the end of year.

The toxic chemical compound has been banned by federal regulators from many children's products, but not flooring. The chemical has been linked to an array of reproductive and development problems in humans.

Read more...

Smart polymers enhance coatings to reduce fouling

Source: *Chemical Engineering*, June 1, 2015
Author: Paul Grad

Scientists from Singapore, including Vivek Vasantha from A*STAR -- The Agency for Science, Technology and Research ... -- developed a new block copolymer that can change its structure when placed in an electrolyte solution, such as salt water. The monomers are poly(ethylene glycol), or PEG, which is hydrophilic, and polysulfabetaine (PSB), which is halophilic (that is, it has a preference for salt solution). Under the Innovative Marine Antifouling Solutions (IMAS) program, the scientists created block copolymers that can self-assemble to form either "conventional" or "inverse" micelles. The conventional micelles form in deionized water, and have a core of halophilic PSB with a hydrophilic PEG shell. When immersed in salt solution, the micelles reassemble themselves to create an inverse micelle, where PEG forms the core and PSB forms the shell.

Read more...

Also see from *Chemical Engineering*, "Micronized Rubber Powder Improves Polymer Loadings".

American workers are getting sick, and CPI wants you to understand why

Source: *Columbia Journalism Review*, July 1, 2015
Author: David Uberti

When Jim Morris told *CJR* about the Center for Public Integrity's labor and environment team in March, he extolled the virtues of putting both topics under one umbrella. "We're talking about things like toxic chemicals in the workplace," he said. "It's heavy on science...We're going to stick with workplace health and safety reporting, because it's incredibly important."

That philosophy, which led to a 2014 Pulitzer Prize for a series on coal miners' fight to claim health benefits, continued bearing fruit this week. On Monday, CPI began publishing findings of an 18-month investigation on work-related disease in America. The multi-part exposé, complete with methodology, catalogues the toxic substances that many Americans come into contact with in the workplace -- and the weak federal regulations that fail to police them. Workers from construction sites to grocery stores to semiconductor manufacturing plants often touch or inhale chemicals that hold the potential, advocates say, to irreparably damage or end lives.

Read more...

See the Center for Public Integrity's series on worker health.

Tests Find Asbestos in Kids' Crayons, Crime Scene Kits

Source: Environmental Working Group Action Fund, July 2015
Authors: Bill Walker and Sonya Lunder

Samples of four brands of children's crayons and two kids' crime scene fingerprint kits contained deadly asbestos fibers, according to tests commissioned by EWG Action Fund.

The toys, purchased at national retail chains or through online retailers, were tested by two government-certified laboratories, using state-of-the-art equipment. The results are significant because even trace exposure to asbestos can cause cancer and other fatal lung disease.

The tests found asbestos in four of the 28 boxes of crayons tested, several marketed under the names of popular fantasy characters Mickey Mouse, Power Rangers and Teenage Mutant Ninja Turtles. Two of the 21 crime scene fingerprint kits were tainted with asbestos.

According to package labels, all the crayons and toys that contained asbestos were made in China and imported to the U.S. It is unclear whether the companies whose names or trademarked characters appear on the packages are responsible for, or had any role in, the manufacturing of the products or whether they merely licensed the use of their trademarks.

Read more...

Access full report here.

RIVM publishes new report assessing health and environmental risks of nanoparticles

Source: *SafeNano*, June 12, 2015

The Dutch National Institute for Public Health and the Environment (RIVM) has published a new report which describes and assesses the current state of affairs with regards to the development and use of nanomaterials/nanoparticles, including the ability to assess possible human and environmental toxicological risks.

The report, which builds upon an earlier report published in 2009, includes an overview of the current European regulatory regime for nanomaterials, and then focuses on the current state of affairs in risk assessment and toxicology. General insights have been amplified for some distinct fields such as consumer products, food, medical applications, workplace applications and the environment.

Read more...

Access full report from RIVM, "Assessing health & environmental risks of nanoparticles".

Please send a message to mary@turi.org if you would like more information on any of these resources. Also, please tell us what topics you are particularly interested in monitoring, and who else should see Greenlist. An online search of the TURI Library catalog can be done at http://library.turi.org for greater topic coverage.

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