

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.



Answering the Call for Improved Chemical Alternatives Assessments (CAA)

[Source: Environmental Science & Technology, January 27, 2015](#)

Authors: Joel Tickner, David Dorman, & Marilee Shelton-Davenport

As knowledge about chemical impacts on health and ecosystems continues to increase, so will pressures to avoid certain chemicals and chemical processes. Identifying and adopting alternatives to chemicals of concern is not straightforward. As such, there are a growing number of efforts by scientists, policymakers and others to improve chemical alternatives assessment (CAA) approaches, processes for identifying, comparing and selecting safer alternatives to chemicals of concern. Two main drivers in these assessments are to identify safer chemical alternatives and avoid situations where a substituted chemical is found to be unsuitable (i.e., "regrettable substitutions").

It is important that entities demanding, selecting, or adopting alternatives to chemicals of concern have adequate processes and a knowledge base to ensure thoughtful consideration of the choices. The foundational elements needed to make more informed chemical substitution choices were recently considered by a U.S. National Research Council (NRC) Committee charged with developing a Framework to Guide the Selection of Chemical Alternatives.

[Read more...](#)

Also see an [archived webinar](#) on the Framework.

TURI's Note: The TURI Library just acquired a hard copy of the Framework to Guide the Selection of Chemical Alternatives. A PDF version is available [here](#).

EPA Approves New Climate-Friendly Refrigerants

[Source: U.S. Environmental Protection Agency, March 2, 2015](#)

WASHINGTON -- As part of President Obama's Climate Action Plan, the U.S. Environmental Protection Agency (EPA) is increasing the options for refrigerants used in various kinds of refrigeration and air conditioning equipment in the United States that offer better climate protection without harming the ozone layer. This final action addresses refrigerants under the Climate Action Plan that calls on EPA's Significant New Alternatives Policy (SNAP) Program to identify and approve additional climate-friendly chemicals. ...

After receiving input from industry, environmental groups, and others, EPA is approving additional low-GWP hydrocarbon refrigerants, subject to use conditions, in the following refrigeration and air conditioning applications:

- * Ethane in very low temperature refrigeration and in non-mechanical heat transfer;
- * Isobutane in retail food refrigeration (stand-alone commercial refrigerators and freezers) and in vending machines;
- * Propane in household refrigerators, freezers, or combination refrigerators and freezers, in vending machines, and in room air conditioning units;
- * The hydrocarbon blend R-441A in retail food refrigeration (stand-alone commercial refrigerators and freezers), in vending machines and in room air conditioning units; and
- * HFC-32 (difluoromethane) in room air conditioning units. HFC-32 has one-third the GWP of the conventional refrigerants currently being used in room air conditioning units.

[Read more...](#)

Chemical Exposure Linked to Billions in Health Care Costs

[Source: National Geographic, March 5, 2015](#)

Author: Elizabeth Grossman

Exposure to hormone-disrupting chemicals is likely leading to an increased risk of serious health problems costing at least \$175 billion (U.S.) per year in Europe alone, according to a study published Thursday.

Chemicals that can mimic or block estrogen or other hormones are commonly found in thousands of products around the world, including plastics, pesticides, furniture, and cosmetics.

The new research estimated health care costs in Europe, where policymakers are debating whether to enact the world's first regulations targeting endocrine disruptors. The European Union's controversial strategy, if approved, would have a profound effect on industries and consumer products worldwide.

[Read more...](#)

See original study in the *Journal of Clinical Endocrinology & Metabolism*, "[Estimating Burden and Disease Costs of Exposure to Endocrine-Disrupting Chemicals in the European Union](#)".

Also see article from Environmental Working Group, "[EU Study Highlights Toll of Poorly Regulated Toxic Chemicals](#)".

Bio-based Polyurethane Foam Made from Compatible Blends of Vegetable-Oil-based Polyol and Petroleum-based Polyol

[Source: ACS Sustainable Chemistry & Engineering, March 6, 2015](#)

Authors: Chaoqun Zhang and Michael R. Kessler

The Hansen solubility parameters of a soy-castor oil-based polyol and a petroleum-based polyol are investigated to evaluate their miscibility for polyurethane blends. The two polyols were found to be miscible at different ratios over a temperature range from 25 to 90 °C. Blends with different ratios of these two polyols were used to prepare polyurethane foams. With increasing levels of bio-based polyol content, the density of the open cell foams increased. The thermal stability of the polyurethane foams improved, and their thermal conductivity increased, with increasing bio-content, while the foam's compression strength decreased. This study provides a method to evaluate polyol blends for the preparation of polymeric materials that balances economic and environmental considerations.

[Read more...](#)

TURI's Note: View our recent webinar, "[Identifying Safer Solvents Using Hansen Solubility](#)"

[Parameters](#)".

U.S. Details Coating Label Reprieve

Source: [PaintSquare, March 11, 2015](#)

U.S. paint and coating makers who will miss the June 1 deadline for updating their product labeling and safety sheets must be prepared to produce evidence of "reasonable diligence" and "good faith" efforts for their delay, federal regulators say.

Responding to a request from the American Coatings Association, the U.S. Occupational Safety & Health Administration (OSHA) has clarified the terms of its October enforcement reprieve on those federally mandated changes.

The new Hazard Communication Standard (HCS) rules will affect about 945,000 hazardous chemical products handled by 100 million workers in seven million workplaces, officials say. Among other changes, the rules will replace the longstanding Material Safety Data Sheet (MSDS) with the term Safety Data Sheet (SDS). ...

At issue is the June 1, 2015, deadline for chemical manufacturers and importers to align their safety data sheets and labels for coatings, paints and other chemical mixtures with OSHA's revised HCS.

[Read more...](#)

West Virginia Chemical Spill: NTP Studies and Results

Source: [National Toxicology Program, March 10, 2015](#)

In response to the request by the Centers for Disease Control and Prevention/Agency for Toxic Substances and Disease Registry for additional toxicology data on chemicals associated with the Elk River spill in West Virginia, NTP is conducting a number of studies of relatively short duration to provide information relevant to the potential exposures of the Charleston residents.

The major constituents of the spilled liquid are of greatest concern, and these chemicals will be studied in rodent and other model organisms to look for potential developmental effects. NTP will also use cellular, molecular, and computer modeling approaches to try and identify what biological systems are affected. Chemicals of more limited concern, such as minor constituents of the spilled liquid, will be evaluated using similar approaches.

A major focus of the toxicological characterization is to use efficient, medium and high throughput testing methods to derive information for predicting the potential effects of the chemicals spilled in the Elk River.

[Read more...](#)

5 essential practices help assure safer chemicals in products

Source: [GreenBiz.com, March 6, 2015](#)

Author: Beverley Thorpe

Market campaigns for safer chemicals are now a global phenomenon. In China, NGOs are mapping toxic discharges from factories and ranking Chinese companies on their disclosure and cleanup efforts. Their target audience is B2B buyers because green procurement demands can be so effective. Since 2011, brands such as Adidas, Nike, H&M, Levis and Benetton have been the focus of an international Greenpeace campaign to hold their supply chains accountable for contributing to the massive pollution of China's rivers, with the result that these companies and the apparel and footwear sector are collectively screening and assessing chemicals for elimination by 2020.

So how can businesses pick up the pace in removing these chemicals from our economy? Taking a "whack-a-mole" approach -- serially targeting individual chemicals -- barely scratches the surface of what needs to be done. And too often, substitute chemicals have proven equally hazardous.

The Five Essential Practices for retailers, brand owners and suppliers are the outcome of many discussions within market campaigners' Workgroup for Safe Markets. We knew we needed an agreed [upon] frame that would both unify our collective efforts and clarify our goals for the business community. The five practices reflect the BizNGO Principles for Safer Chemicals endorsed by over

60 companies (including such household names as Hewlett-Packard, Staples and Kaiser Permanente) because campaigners want to reflect best practice[s] and drive maximum uptake over the next five years.

[Read more...](#)

Hand-Me-Down Hazard: Flame Retardants in Discarded Foam Products

[Source: *Environmental Health Perspectives*, March 2015](#)

Author: Kellyn S. Betts

On 1 January 2015 California implemented the first U.S. rule mandating that certain products containing polyurethane foam be labeled to identify whether they contain chemical flame retardants. Furniture industry experts predict flame-retardant-free couches, chairs, and other padded furnishings and products will be popular with consumers and large purchasers, and the new labeling law, known as SB 1019, is expected to have influence beyond the state's borders, just as California's flammability standard once drove the use of flame retardants in the rest of the country, and even other parts of the world. Crate and Barrel, IKEA, and La-Z-Boy are among the manufacturers that reportedly offer or will offer furniture with no added flame retardants.

Environmental chemists, scientists, and public health specialists interviewed for this article agree that the new labeling rule represents a great leap forward for consumers. "The consumer should always have the right to know what's in their products, whether they're commercial products, food, or anything else," says Linda Birnbaum, director of the National Institute of Environmental Health Sciences.

[Read more...](#)

China releases updated Catalogue of Hazardous Chemicals

[Source: *Chemical Watch*, March 10, 2015](#)

After two years of deliberation, China has released the updated Catalogue of Hazardous Chemicals (2015), ..., which lists substances that require control under various pieces of regulation. The catalogue was officially published on 9 March by the ten ministries that have been responsible for its compilation, including the State Administration of Work Safety (SAWS), and ministries for industry, environmental protection, health, transport, agriculture, and standards.

It will enter into force on 1 May 2015, when it will replace the existing 2002 version.

The 2015 edition contains 2,828 entries that have been included because of their physical, human health or environmental hazard properties. The 2002 version contained 3,834 substances. It is thought the latest edition has included various groups of chemicals as single entries, so the number of chemicals affected could be higher than for the previous version.

[Read more...](#)

See Decree 591 of the State Council of China in 2011 - Full English Translation (non-official), "[Regulations on the Safe Management of Hazardous Chemicals in China](#)".

TTIP: a threat to EU chemicals regulation?

[Source: *Ecotextile News*, March 11, 2015](#)

Author: Brett Mathews


LONDON -- The UK government has published a new report addressing fears that the proposed Transatlantic Trade & Investment Partnership (TTIP) could pose a serious threat to environmental regulations in the EU -- including laws governing potentially toxic chemicals used in the textile industry. Many NGOs have expressed concern that attempts to harmonise environmental regulations between the EU and US as part of the TTIP will lead to a 'race to the bottom' on environmental regulations, with the EU's stronger focus on applying the precautionary principle in setting regulations being superseded by a US-style focus on a 'cost benefit analysis' assessment of proposed new regulations.

The report by the UK government's Environmental Audit Committee argues that, "the EU's stronger focus on applying the precautionary principle in setting regulations should not be weakened as a

result of efforts under TTIP to align the regulatory standards of the EU and US." It adds: "Where 'mutual recognition' of environmental standards is used to smooth trade between the EU and US, this must be applied only in cases where the regulations are genuinely already providing 'equivalent' safeguards. Failing to keep to such a course risks an unacceptable 'race to the bottom' in environmental regulations."

[Read more...](#)

See the UK Environmental Audit - Ninth Report, "[Environmental risks of the Trans-Atlantic Trade & Investment Partnership](#)".



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Greenlist Bulletin is compiled by:

Mary Butow
Research and Reference Specialist
Toxics Use Reduction Institute
University of Massachusetts Lowell
600 Suffolk St., Wannalancit Mills
Lowell MA 01854-2866
978-934-4365
978-934-3050 (fax)
mary@turi.org