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## PFHxS added to REACH candidate list

[Source: Chemical Watch, July 10, 2017](#)

Echa has added perfluorohexane-1-sulphonic acid and its salts (PFHxS) to the REACH candidate list because of very persistent and very bioaccumulative (vPvB) properties. This brings the total number of substances on the list to 174.

PFHxS is a flame retardant in the same category as per- and polyfluoroalkyl substances (PFAS). It is used in plasticisers, lubricants, surfactants, wetting agents, corrosion inhibitors and firefighting foams.

Sweden proposed that PFHxS should be identified as a substance of very high concern (SVHC) and was backed by Echa's Member State Committee (MSC) last month. Its proposal was based on animal and human data that showed the chemical might have more potential to bioaccumulate in humans than perfluorooctane sulfonate (PFOS), which has been restricted.

[Read more...](#)

Also see press release from the European Chemicals Agency, "[One new substance added to the Candidate List, several entries updated](#)".

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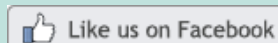
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## **EWG's Nationwide Tap Water Transparency Report is Here: New Database Details Pollutants in Virtually All U.S. Public Water Systems**

[Source: Environmental Working Group, July 26, 2017](#)

WASHINGTON -- Starting today, the vast majority of Americans can learn about every potentially harmful chemical in their drinking water and what scientists say are the safe levels of those contaminants. EWG's new national Tap Water Database is the most complete source available on the quality of U.S. drinking water, aggregating and analyzing data from almost 50,000 public water systems in all 50 states and the District of Columbia. ...

With EWG's new Tap Water Database, simply by entering their zip code or local utility's name, users will find all contaminants detected in tests by the utilities themselves and reported to federal or state authorities. Instead of comparing the levels of pollutants to the legal limits set by regulatory agencies -- often the result of political and economic compromise, or based on outdated studies -- EWG's guide relies on what the best and most current science finds are the levels that will fully protect public health, especially that of infants, children, pregnant women and other vulnerable populations.

[Read more...](#)

[Access EWG's Tap Water Database.](#)

## **Substitution of PFAS chemistry in outdoor apparel and the impact on repellency performance**

[Source: Chemosphere, August 2017](#)

[Authors: Philippa J. Hill, Mark Taylor, Parikshit Goswami, Richard S. Blackburn](#)

Intensifying legislation and increased research on the toxicological and persistent nature of per- and polyfluoroalkyl substances (PFASs) have recently influenced the direction of liquid repellent chemistry use; environmental, social, and sustainability responsibilities are at the crux. Without PFAS chemistry, it is challenging to meet current textile industry liquid repellency requirements, which is a highly desirable property, particularly in outdoor apparel where the technology helps to provide the wearer with essential protection from adverse environmental conditions. Herein, complexities between required functionality, legislation and sustainability within outdoor apparel are discussed, and fundamental technical performance of commercially available long-chain (C8) PFASs, shorter-chain (C6) PFASs, and non-fluorinated repellent chemistries finishes are evaluated comparatively. Non-fluorinated finishes provided no oil repellency, and were clearly inferior in this property to PFAS-finished fabrics that demonstrated good oil-resistance. However, water repellency ratings were similar across the range of all finished fabrics tested, all demonstrating a high level of resistance to wetting, and several non-fluorinated repellent fabrics provide similar water repellency to long-chain (C8) PFAS or shorter-chain (C6) PFAS finished fabrics. The primary repellency function required in outdoor apparel is water repellency, and we would propose that the use of PFAS chemistry for such garments is over-engineering, providing oil repellency that is in excess of user requirements. Accordingly, significant environmental and toxicological benefits could be achieved by switching outdoor apparel to non-fluorinated finishes without a significant reduction in garment water-repellency performance. These conclusions are being supported by further research into the effect of laundering, abrasion and ageing of these fabrics.

[Read more...](#)

## State releases first water quality data, updated health information for GenX in Cape Fear River

[Source: North Carolina Department of Environmental Quality, July 14, 2017](#)

[Author: Jamie Kritzer](#)

State officials today released their first results of water quality samples and an updated preliminary health assessment for concentrations of the unregulated compound GenX in finished, or treated, drinking water.

The revised health goal for exposure to GenX in drinking water is 140 nanograms per liter (also referred to as parts per trillion).

Samples were analyzed at the U.S. Environmental Protection Agency lab in Research Triangle Park and at Test America, a lab in Colorado under contract to Chemours.

Data from samples collected June 19 and July 6 show that the most recent results of finished, or treated, water in all but one facility were below the N.C. Department of Health and Human Services' health goal of 140 parts per trillion. The data also reveal that concentrations of GenX are trending downward.

Although no information is available about recreational health risks, people should refrain from swimming near the Chemours facility.

[Read more...](#)

See news story from *WECT*, ["Tracking GenX: Concentration level trends and what you need to know"](#).

## Happy Birthday EU Ecolabel!

[Source: Environment for Europeans, June 21, 2017](#)

Launched in 1992, the EU Ecolabel is a pioneering tool of the circular economy. For a quarter of a century, the label's strict criteria have supported sustainable production and consumption. Products displaying the EU Ecolabel have a lower environmental impact and contribute to sustainable development throughout their life cycle, being resource efficient, durable and repairable. Thanks to transparent ecological criteria, consumers can make conscious choices without compromising product quality.

"Over the last 25 years, thousands of companies have chosen to use the EU Ecolabel and to respond to growing consumer demand for more sustainable products. Clearly, the Ecolabel is one of the most practical tools of the circular economy and the Single Market. The European Commission is committed to providing reliable consumer information and promoting sustainable lifestyles for citizens," says Karmenu Vella, European Commissioner for the Environment, Maritime Affairs and Fisheries.

With the European Commission's adoption of an ambitious Circular Economy Package in December 2015, sustainability tools such as the EU Ecolabel are becoming more important. A key element of the legislation is to promote greener products on the market and support recovery and recycling schemes. The reduction of environmental impacts through safe chemical use, package recovery and recycling and sustainable sourcing are at the heart of the EU Ecolabel programme.

[Read more...](#)

## House dust may contribute to obesity, US study suggests

Source: [Chemical Watch, July 13, 2017](#)

US researchers may have found more evidence that house dust exposure can boost fat storage.

A team led by Heather Stapleton from Duke University exposed cells *in vitro* to 11 indoor dust extracts before measuring levels of triglyceride -- the main constituent of body fat -- and fat cell proliferation.

Ten of the extracts caused "significant" triglyceride accumulation and/or cell proliferation at environmentally relevant levels.

The fat boosting activity occurred at levels below US EPA exposure estimates for children.

[Read more...](#)

See original article in *Environmental Science & Technology*, "[Characterization of Adipogenic Activity of House Dust Extracts and Semi-Volatile Indoor Contaminants in 3T3-L1 Cells](#)".

## Effective July 1, 2017: Children's Foam-Padded Sleeping Products with TDCPP or TCEP as a Priority Product

Source: [California Department of Toxic Substances Control, July 1, 2017](#)

The proposal to list Children's Foam-Padded Sleeping Products containing TDCPP or TCEP as a Priority Product went into effect on July 1, 2017. Manufacturers who make this product (see final regulations text for full description of the Priority Product) have sixty (60) days from the effective date of the Regulation to notify the Department that they are a Responsible Entity. To submit a Priority Product Notification, register on the Safer Consumer Products Information Management System, CalSAFER, and submit a notification.

A primary goal of DTSC's Safer Consumer Products program is to reduce people's exposure to toxic chemicals in consumer products. When we look at different products available in the marketplace, we think about how and where people are exposed to the chemicals in those products. We pay particular attention to chemicals that might harm infants and children. If research studies show that particular chemicals in a product could cause health problems, we can list that product as a Priority Product. Companies that make and sell the product will have to try to make the product safer for consumers.

After a thorough review of the research, DTSC determined that children may be at risk for adverse health effects if they use or are near children's foam-padded sleeping products that contain the chemical flame retardants TDCPP or TCEP. We are proposing to list this Priority Product with the goal of reducing children's exposure to these particular toxic chemicals.

[Read more...](#)

See the DTSC Technical Report, "[Summary of Technical Information and Scientific Conclusions for Designating Children's Foam-Padded Sleeping Products Containing Tris\(1,3-dichloro-2-propyl\) Phosphate \(TDCPP\) or Tris\(2-chloroethyl\) Phosphate \(TCEP\) as a Priority Product](#)".

## Work on guidance document for identifying endocrine disruptors proceeding

[Source: European Chemicals Agency, July 20, 2017](#)

After an outline of the Guidance on how to identify pesticides and biocides with endocrine disrupting properties was published, a draft guidance has been developed and is currently subject to expert consultation. A public consultation will start later.

Helsinki, 20 July 2017 -- A joint drafting group consisting of scientific staff from the European Food Safety Authority (EFSA) and ECHA, with support from the Joint Research Centre, began working on the guidance in January 2017.

In April, the joint drafting group consulted a specially constituted consultation group on an initial draft of the guidance. The consultation group supports the joint drafting team in drafting the guidance document for public consultation. It includes members of ECHA's Endocrine Disruptors Expert Group and pesticide experts from EU Member States and other stakeholder groups.

[Read more...](#)

See the ECHA hot topics page on [endocrine disruptors](#).

## Materials emitted by a water pipe repair method may pose health risks, new safeguards and research needed

[Source: Phys.org, July 28, 2017](#)

New research is calling for immediate safeguards and the study of a widely used method for repairing sewer, stormwater and drinking water pipes to understand the potential health and environmental concerns for workers and the public.

The procedure, called cured-in-place pipe repair, or CIPP, was invented in the 1970s. It involves inserting a resin-impregnated fabric tube into a damaged pipe and curing it in place with hot water or pressurized steam, sometimes with ultraviolet light. The result is a new plastic pipe manufactured inside the damaged one. The process can emit chemicals into the air, sometimes in visible plumes, and can expose workers and the public to a mixture of compounds that can pose potential health hazards, said Andrew Whelton, an assistant professor in Purdue University's Lyles School of Civil Engineering and the Environmental and Ecological Engineering program.

He led a team of researchers who conducted a testing study at seven steam-cured CIPP installations in Indiana and California. The researchers captured the emitted materials and measured their concentration, including styrene, acetone, phenol, phthalates and other volatile (VOC) and semi-volatile organic compounds (SVOC). ...

Findings show that the chemical plume, commonly thought of as harmless steam, was actually a complex mixture of organic vapor, water vapor, particulates of condensable vapor and partially cured resin, and liquid droplets of water and organic chemicals.

"CIPP is the most popular water-pipe rehabilitation technology in the United States," Whelton said. "Short- and long-term health impacts caused by chemical mixture exposures should be immediately investigated. Workers are a vulnerable population, and understanding exposures and health impacts to the general public is also needed."

[Read more...](#)

See article on the research in *Environmental Science & Technology Letters*, "[Worksite Chemical Air Emissions and Worker Exposure during Sanitary Sewer and Stormwater Pipe Rehabilitation Using Cured-in-Place-Pipe \(CIPP\)](#)".

## EC Publishes Final Report of Nanocomput Project

Source: [The National Law Review, July 26, 2017](#)

Authors: Lynn Bergeson and Carla Hutton

In July 2017, the European Commission's (EC) Joint Research Center (JRC) published a report entitled *Evaluation of the availability and applicability of computational approaches in the safety assessment of nanomaterials: Final report of the Nanocomput project*. The main aims of the Nanocomput Project were to review and assess the current status of computational methods that are potentially useful for predicting the properties of engineered nanomaterials to provide advice on the use of these approaches for the purposes of the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) regulation. The Project emphasized quantitative structure-property relationship (QSPR) and quantitative structure-activity relationship (QSAR) models, and their potential role in predicting nanomaterial properties. In addition, the Nanocomput Project assessed the status of a diverse array of compartment-based mathematical models. These models comprised toxicokinetic, toxicodynamic, *in vitro* and *in vivo* dosimetry, and environmental fate models. The report includes overall conclusions from the Nanocomput Project, including lessons learned in conducting literature reviews and research-based case studies on grouping and read-across. It offers a number of recommendations intended to overcome current shortcomings in the knowledge of nanomaterial behavior and in the availability of tools (such as databases and predictive models) and practical guidance to use such tools in the regulatory assessment of nanomaterials.

See the EC report, "[Evaluation of the availability and applicability of computational approaches in the safety assessment of nanomaterials: Final report of the Nanocomput project](#)".

## Thermally Insulating and Flame-Retardant Polyaniline/Pectin Aerogels

Source: [ACS Sustainable Chemistry & Engineering, July 14, 2017](#)

Authors: Hai-Bo Zhao, Mingjun Chen, and Hong-Bing Chen

Biomass-based thermally insulating and flame-retardant polymer aerogels were fabricated from renewable pectin (PC) and aniline via polymerization-coagulation and a supercritical drying process. A special physical cross-linking action existed between PC and polyaniline (PA). The resultant aerogels showed three-dimensional networks with hierarchical pores and high surface areas ( $103\text{-}205\text{ m}^2\text{ g}^{-1}$ ). With benefits from the cross-linking structure, the pectin-based aerogels exhibited good compressive strengths (4.7-9.2 MPa) and water resistance. The results from thermal conductivity measurements and thermogravimetric analysis revealed that these aerogels also had low thermal conductivity ( $0.033\text{-}0.038\text{ W m}^{-1}\text{ K}^{-1}$ ) and considerable thermal stability. The limiting oxygen index, vertical burning tests, microscale combustion, and cone calorimetry tests further confirmed that the inherently low flammability of the aerogels could be achieved by the flame retardancy of PA and the cross-linking action between PA and PC. These aerogels with good mechanical properties, water resistance, and low thermal conductivity and flammability show promising prospects in the field of thermal insulation.

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Also see from [ACS Sustainable Chemistry & Engineering](#), "[Straightforward Route To Design Biorenewable Networks Based on Terpenes and Sunflower Oil](#)".

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