

## Safer Alternatives to Phthalates are Widely Available

Phthalates (“THAL-eights”) are a class of hormone-disrupting chemicals that are widely used to soften plastics and synthetic rubber, and to carry other chemical ingredients in inks, adhesives and fragrance. Plastics such as polyvinyl chloride (also known as PVC or vinyl) must be softened with chemicals known as plasticizers in order make them flexible. Many alternative plasticizers have been commercialized as safer substitutes for phthalates.

### Food Industry Leaders Ban the Use of Phthalates in Food Packaging

Major food manufacturers such as **Nestlé** prohibit the use of phthalates in all of their food packaging: “*ortho*-Phthalates – Must not be used as plasticizers and additives in packaging materials including inks, adhesives, plastics, etc.” <sup>1</sup> A major food industry group, the **Food Safety Alliance for Packaging**, also recommends to all suppliers of food packaging that: “Phthalates should not be used as plasticizers and additives in packaging materials including inks, adhesives, plastics, etc., where suitable alternatives exist.” <sup>2</sup>

| Use of Phthalates in Food Packaging   | Proven Safer Alternatives  |
|---|--|
| <b>Plastic Film Wrap</b> – formerly widely used in cling film wrap made of PVC or PVDC, a plastic closely-related to vinyl  | Safer materials, e.g. polyethylene plastic<br>Safer plasticizers   |
| This use of phthalates has been completely phased out in favor of safer alternatives. <sup>3</sup>  |  |
| <b>Printing Inks and Adhesives</b> – used on food packaging labels and in containers  | Phthalate-free inks and adhesives  |
| Major food industry leaders, including Nestlé, prohibit the use of phthalates in their food packaging, including in printing inks <sup>4</sup> and adhesives. (See also footnotes 1 and 2).   |  |
| <b>Food Service Gloves</b> – used in plastic disposable vinyl gloves in restaurants, grocery delis and school cafeterias  | Safer materials, such as polyethylene, are used by <b>Panera Bread</b> and others<br>Safer plasticizers for vinyl gloves |
| In a recent survey, only about 15% of vinyl food service gloves still contained phthalates. <sup>5</sup>  |  |
| <b>Cap Gaskets</b> – made of PVC (vinyl) and used on the metal lids of glass jars of food and on metal bottle caps of beverages   | Non-vinyl gaskets<br>Safer plasticizers for vinyl gaskets  |
| A recent study of foods in glass jars found that only 16% of metal cap gaskets contained phthalates, with most using safer alternative plasticizers. For metal bottle caps, 60% of the gaskets contained phthalates, while 40% used safer plasticizers or non-vinyl gaskets. <sup>6</sup> |  |

## ***What are the safest alternatives?***

Fortunately, safer alternatives are widely available. The best strategy is to completely avoid flexible vinyl plastic, which has toxic impacts across its lifecycle and inevitably exposes people to plasticizer chemicals in their food. Some plasticizers are demonstrably safer than phthalates, but not all have been adequately studied for hormone-disrupting properties.

## ***How are people exposed to phthalates?***

Phthalates escape from food processing and packaging materials into our food, which is the major source of phthalate exposure for most people. Phthalates also build up in house dust, which children ingest from hand-to-mouth contact, from vinyl flooring, window treatments, wallpaper and consumer products. People are also exposed from skin contact with personal care products. Workers in plastics and rubber plants are exposed on the job.

## ***Why are government and business leaders phasing out the use phthalates?***

An expert science panel to the federal government concluded that 5% to 10% of pregnant women and infants are exposed daily to unsafe levels of five phthalates that threaten reproductive harm, especially to boys, that may lead to lowered fertility and increased risk of testicular and prostate cancer and early death.<sup>7</sup> Up to 725,000 American women of childbearing age still face unacceptable risks.<sup>8</sup> Independent scientists have also identified phthalates as “brain drain” chemicals that increase attention deficit/hyperactivity disorder (ADHD) symptoms, making it harder for children to succeed in school, work and life.<sup>9</sup>

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<sup>1</sup> Nestlé (September 2016) **Summary/Abstract of Nestlé Standards On Materials in Contact with Food:** “These STANDARDS outline the Nestlé requirements which are **mandatory** for food packaging. ... 9. Lamination adhesives – *ortho*-Phthalates – Must not be used. ... 11. Metal closure gaskets – *ortho*-Phthalates – Must not be used.” ... 16. *ortho*-Phthalates – Must not be used as plasticizers and additives in packaging materials including inks, adhesives, plastics, etc.” Version 4.0.1.

<sup>2</sup> Institute for Food Packaging, Food Safety Alliance for Packaging (09 March 2018) **Food Packaging Product Stewardship Considerations**, Version 1.0, <https://www.iopp.org/i4a/pages/index.cfm?pageid=4473>.

<sup>3</sup> Carlos KS, de Jager LS & Begley TH (2018) **Investigation of the primary plasticizers present in polyvinyl chloride (PVC) products currently authorised as food contact materials**, *Food Additives & Contaminants: Part A*, 35:6 1214-1222, <https://doi.org/10.1080/19440049.2018.1447695>.

<sup>4</sup> Nestlé (August 2016) **Nestlé Guidance Note on Packaging Inks:** “General exclusion for ink formulations: ... \* *ortho*-Phthalate (commonly called phthalate) plasticizers must not be used.” <http://www.argus-analysen.de/assets/plugindata/poola/nestle-guidance-note-on-packaging-inks-2016-08.pdf>.

<sup>5</sup> Coalition for Safer Food Processing and Packaging (2019). Unpublished data based on testing of about 150 plastic disposal food service gloves representative of the market.

<sup>6</sup> *Op. cit.*, Footnote 3.

<sup>7</sup> Report to the Chronic Hazard Advisory Panel (CHAP) to the U.S. Consumer Product Safety Commission on Phthalates and Phthalate Alternatives (July 2014) <https://www.cpsc.gov/chap>.

<sup>8</sup> U.S. Consumer Product Safety Commission (2017) **Estimated Phthalate Exposure and Risk to Women of Reproductive Age as Assessed Using 2013/2014 NHANES Biomonitoring Data**, U.S. Consumer Product Safety Commission, CPSC/EXHR/TR—17/XXX, February. <https://www.cpsc.gov/chap>.

<sup>9</sup> Bennett D, Bellinger DC, Birnbaum LS, *et al.* (2016) Project TENDR: Targeting Environmental Neuro-Developmental Risks The TENDR Consensus Statement, *Environmental Health Perspectives* 124(7): A118-A122, <https://doi.org/10.1289/EHP358>.