

# Chemical Compositions Overview

## What are these chemicals, and what's Appvion doing about them?

The information below is provided to help clarify the chemicals causing buzz within the direct thermal paper industry due to recent regulatory updates, like the California Proposition 65 (CA Prop 65) and Safer Products for Washington laws. The difference between the two laws is that while CA Prop 65 will mandate warning labels, Safer Products for Washington will necessitate reporting beginning on January 1, 2025, and, subsequently, most likely will prohibit the sale and distribution in WA of all products containing BPS starting on January 1, 2026.

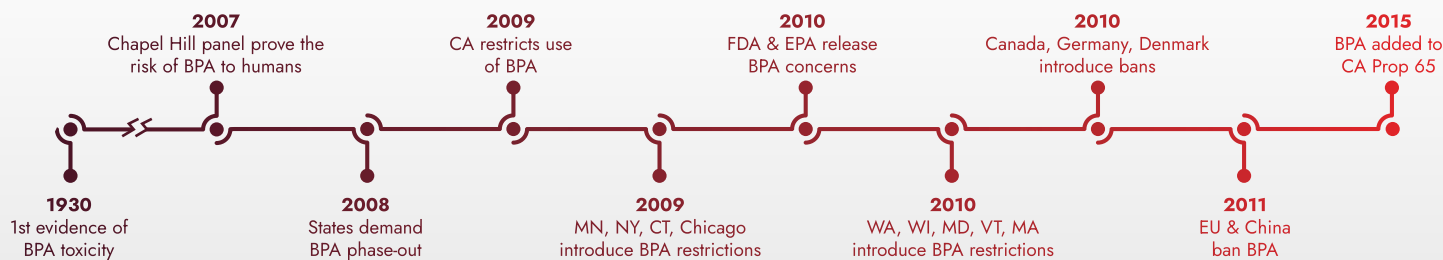
## BPS, BPA, & Other Phenolic Developers

CA Prop 65 added Bisphenol A (BPA) as a chemical of concern in 2015, and Bisphenol S (BPS) was recently added in December 2023 with a grace period until December 29, 2024. Phenolic developers, used in most direct thermal papers, are of concern due to their potential impact to drinking water sources and potential for aquatic toxicity. BPS replaced BPA in many direct thermal products, but it has now been added to CA Prop 65. Appvion led the market by removing BPA from its products in 2006. While some other phenolic developers are not on the Prop 65 list and are currently compliant, Appvion is working to utilize its industry-leading phenol-free chemistry to remove all phenolic developers from its products by Q2 of 2025.

## Appvion's Patent-Pending Phenol-Free Chemistry

Through rigorous testing and continuous improvement over the last decade, Appvion has successfully engineered a direct thermal paper coating made from natural materials. This revolutionary solution is aquatic friendly and performs just as effectively, or better, than other products on the market, offering a brilliantly safer and environmentally friendly choice for all. New, patent-pending direct thermal chemistry does not use any phenolic developers, and it maintains high-quality performance for its direct thermal paper with better contrast than other phenol-free solution on the market.

Appvion chose to invest in inventing a revolutionary phenol-free chemistry that performs the same as or better than its BPS counterpart because it foresaw BPS following the same path as BPA. When the first states started adding BPA restrictions to regulations, other states and international countries began implementing similar restrictions within 2-5 years. In fact, within 2 years (between 2008-2010), 9 states and a handful of international countries had already set restrictions in place. Knowing this timeline and the similarities of BPA, BPS, and most of the alternatives studied by the EPA in 2015, it's reasonable to believe that BPS will follow similar footsteps to BPA and more states will likely adopt restrictions.





# California Proposition 65

You may have heard California added Bisphenol S (BPS) to its list of chemicals regulated under its Proposition 65 law (Safe Drinking Water and Toxic Enforcement Act of 1986), effective December 29, 2023. Since its inception in 1986, Proposition 65 has consistently added chemicals after its annual review. One of its goals is to remove any chemicals known to cause cancer, birth defects, or other reproductive harm to protect California's drinking water sources.

## What does this mean for businesses?

Proposition 65 requires that all products containing chemicals on the list be labeled with a warning. It also encourages the removal of these chemicals from products sold in California, thus requiring businesses to develop alternative solutions while keeping quality high and cost manageable.

## What are others doing about it?

Some other thermal paper producers might opt for alternative solutions that the EPA has classified as a moderate hazard to reproductive and developmental human health, with little to no biodegrading properties. Others are utilizing non-phenolic developers that produce sub-standard environmental and chemical resistance and print quality with fading issues in some applications. Demand for products without phenolic developers and aquatic toxins is likely to continue to increase, as regulator demand companies to create environmentally-friendly solutions.

## What is Appvion doing about it?

Continuing its innovation leadership with its patent-pending direct thermal chemistry which does not use phenolic developers, including BPS while maintaining high-quality performance with better contrast and fade resistance.

Transitioning its entire product portfolio to sustainable chemistries compliant with this regulation, thereby ensuring peace of mind. It's not just about compliance; it's about creating a better tomorrow.

Through rigorous testing and continuous improvement, Appvion has engineered a direct thermal paper coating that performs just as effectively, or better, than other products on the market, offering a safer and environmentally friendly choice made in the USA.



Ecological



Compliant



High-Quality



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