



## **Additional Background on BPA, Prop 65 and BPANI Linings**

### **What is the connection between epoxy can linings and BPA?**

Nearly all aluminum and steel beverage and food cans made today use epoxy-based resin linings. These linings extend shelf life, protect the can's contents from the metal packaging and protect the packaging from the contents. They also reduce the potential for serious illness by enabling high temperature sterilization, which virtually eliminates the dangers of food poisoning from microbial contaminants. The epoxy resin that gives these linings their durability may include trace amounts of bisphenol A (BPA). The U.S. Food & Drug Administration (FDA), which has conducted wide-ranging research on epoxy-based can linings containing BPA and reviewed hundreds of other scientific studies, continually reaffirms that the trace amounts of BPA which may be found in food and beverage packaging is safe.

### **Why did California add BPA to its Proposition 65 list?**

California Proposition 65, the Safe Drinking Water and Toxic Enforcement Act of 1986, notifies consumers through warning labels that they may be exposed to chemicals "known to the state to cause cancer and/or reproductive toxicity." California regulators listed BPA in connection with female reproductive toxicity, however, they have not provided a maximum allowable dose level (MADL). The U.S. Food and Drug Administration, which has the power to ban products in the U.S., maintains the position that the trace amounts of BPA that can be found in metal packaging is safe.

### **What levels of BPA are typically found in beverages packaged in cans using epoxy linings?**

The trace levels of BPA that can be found in canned beverages that use existing, epoxy linings are very low, measured in parts per billion. In order to provide additional information to our customers, Ball contracted an outside lab in April 2016 to test for BPA levels in a range of canned beverages including beer, soft drinks and a milk-based retort beverage. The results came back at less than 5 parts per billion, the smallest amount the lab could measure. Ball is exploring whether more sensitive testing equipment is available for additional samples.

### **Are those low levels of BPA due solely to linings?**

BPA can come from many sources, including water used in beverages, metal pipes use to transport water and other ingredients used to make beverages and foods.

### **What are BPA non intent (BPANI) can linings?**

BPANI linings are the next generation of internal can linings, formulated to eliminate BPA in the lining itself. The exact chemical structure can vary by lining and even by supplier, and much of that information is considered proprietary by linings suppliers.

### **Do BPANI linings perform the same as existing, epoxy linings?**

No single BPANI lining tested so far matches the performance of existing, epoxy-based linings across the wide range of products packaged in cans. The BPANI linings available from Ball comply with Prop 65, with minimal impact on shelf life, for most products. More aggressive products may require a change in warranty. Ball's current terms and conditions provide more information. As we continue to work with linings suppliers on future linings, our goal is to offer a BPANI lining that performs well for virtually all beverages packaged in Ball cans.

### **What is the difference between BPANI Gen 1 and BPANI Gen 2 linings?**

Over the course of the past several months we have begun to phase out the terms “Gen 1 and Gen 2.” We offer multiple BPANI linings that meet the requirements of California Prop 65 regarding BPA and other materials, and Ball worked with linings suppliers to make them available to its customers before Prop 65 deadlines. Some of the best-performing linings were launched in 2016, while others have become available more recently. As mentioned above, no single lining is the “best” and performance can depend on the type of beverage packaged.

**What about flavor impact?**

Ball does not provide any official flavor testing, but there could be a slight impact in that some flavor could be lost when using the BPANI lining. As always, we encourage our customers to do their own flavor testing to determine if their specific beverages are impacted.

**If I choose to use BPANI linings, can I say my products are “BPA-Free?”**

Ball does not refer to cans which use BPANI linings as “BPA-Free.” BPA can come from many sources, including water used in beverages, metal pipes use to transport water and other ingredients used to make beverages. Using BPANI linings means that no BPA was intentionally added to the lining by Ball or Ball’s suppliers.