Alternatives Development via Safety By Design: Lessons and Challenges

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The Challenge

- Question: How do you make the best coating for metal packaging that goes beyond compliance and strives for more?
- Food Contact Regulatory Agencies focus on conventional toxicity and risk-based safety assessments
- Chemical Inventory Regulatory Agencies require GLP-based health and environmental tests
- Recognized the gap between testing for compliance and a more comprehensive answer
Safety By Design & Bridging the Gap

Product Development Ideation

Material Investigation Process

Monitoring Chemicals of Concern

Endocrine Activity Testing

Toxicologic Testing

Migration Analysis

Global food contact and chemical inventory regulatory approvals

MATERIALS DESIGNED TO MINIMIZE RISK
Lessons Learned: Outreach to stakeholders

Regulatory Authorities Engaged

(Does not imply endorsement, approval, or future activity)
Lessons Learned:
Collaboration and Search for Answers

Evidence of Absence: Estrogenicity Assessment of a New Food-
Contact Coating and the Bisphenol Used in Its Synthesis

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Characterizing properties of non-estrogenic substituted bisphenol analogs using high throughput microscopy and image analysis

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Lessons Learned: Data Transparency and Increasing Visibility

• Sherwin-Williams does not just want the studies conducted, but freely available.

• Supporting studies and links to the journal articles are on our website:
  ➢ www.valpure.com

• ChemSec Marketplace

valPure® V70 - the first next generation coating technology with epoxy-like performance

Possible replacement to:
valPure V70 is a replacement for industry standard epoxy-based coatings/linings for light metal packaging
Challenge: Grouping approach to chemical regulation

• Grouping strategies for assessing chemicals with structural similarities
• Group-based regulatory restrictions, classification, labelling, etc.
• Increased regulatory efficiency and effectiveness
• Breaks from evidence-based evaluation
Summary

Lessons
• Outreach and collaboration
• Data transparency
• Increasing visibility

Challenges
• Chemical grouping evaluation process

Valpure® can coatings used in more than 50 billion cans in 2017

Thank you for your kind attention!