

# SAFETY BY DESIGN

*ROADMAP TO INNOVATIVE, SAFE AND SUSTAINABLE  
COATING TECHNOLOGIES*

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Food  
Packaging  
Forum



# THE CURRENT LANDSCAPE

*ACCELERATING TOWARDS A SUSTAINABLE FUTURE*

**The European Green Deal sets objectives for a more sustainable packaging value chain, which include**

- Ensuring all packaging in the EU is reusable or recyclable by 2030
  - Defining measures to reduce packaging waste
  - Promoting a robust Single Market for secondary raw material to increase recycling
- 
- The metal can is infinitely recyclable, with 75% of all aluminium ever produced still in use today



At Sherwin-Williams, we view metal packaging as the gold standard for the future of the packaging industry

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# THE IMPORTANCE OF CAN COATINGS

- Nearly every can in the world is now coated with some type of protective or decorative coating

## Packaging coatings

- Provide a barrier between the product and the metal container
- Help prevent foodborne illnesses such as botulism
- Preserve the flavor and nutritional content of the product
- Enable longer supply routes, allowing critical foods and beverages to reach a greater portion of the world's population



The Global Packaging Coatings market is now estimated at \$3.2+ billion USD

# THE CHANGING REGULATORY ENVIRONMENT IN EUROPE

- The EU Commission published a Chemicals Strategy for Sustainability Toward a Toxic-Free Environment in October 2020

“Safe and Sustainable-by-Design can be defined as a pre-market approach to chemicals that focus on providing a function or service, while avoiding volumes and chemical properties that may be harmful to human health or the environment.”

- Ensuring compliance with current food contact regulation does not create enduring solutions
- Removing a singular chemical of concern is not enough
- To ensure the health and safety of consumers, we must think beyond traditional technologies

# SAFETY BY DESIGN

PIONEERING A NEW RIGOROUS  
PRODUCT DEVELOPMENT PROCESS



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# THE SAFETY BY DESIGN DEVELOPMENT PROCESS

COMMITTED TO NEXT-GENERATION PRODUCT DEVELOPMENT THROUGH INNOVATIVE PROGRAMS AND INDUSTRY EXPERTS



**Safety by Design** is a product development protocol that includes rigorous product testing for regulatory and environmental compliance, ensuring products are developed to stand up to scientific rigor over the long term.

# ENSURING LONGEVITY, SAFETY AND SUSTAINABILITY

*DELIVERING SAFE, SUSTAINABLE, HIGH-PERFORMANCE, INNOVATIVE COATING SOLUTIONS*

**Safety by Design is the industry's most robust product development process, with independent third-party scrutiny from**

- Toxicologists
- Non-governmental organizations (NGOs)
- Independent laboratories
- Universities

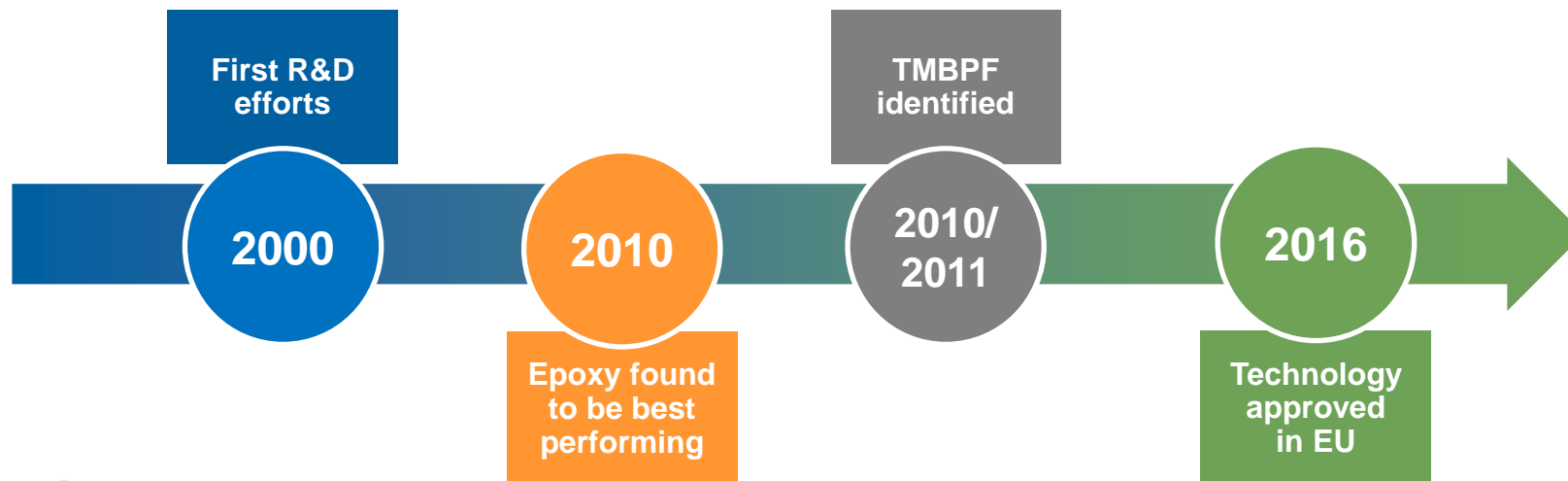
## **Safety by Design**

- Anticipates emerging regulations and safety concerns
- Meets consumer and brand preferences
- Provides safe and sustainable solutions using modern safety assessment methods
- Brings long-term packaging solutions to market

# DEVELOPING NEXT-GENERATION CAN COATINGS

## valPure® v70

- The industry was exploring different coating technologies to transition away from Bisphenol-A (BPA)
- Most suppliers started with acrylic and polyester, but these chemistry platforms could not match the performance of traditional epoxy coatings
- To create a non-BPA coating that matched the superior performance of epoxies, we used our Safety by Design process





# THE CASE OF VALPURE® V70

*A SAFE, HIGH-PERFORMING AND INNOVATIVE COATING SOLUTION, WITHOUT THE USE OF BPA*

- Tetramethyl Bisphenol-F (TMBPF) provides the same performance benefits of other epoxies but exhibits no estrogenic activity
- Worked with regulators, contract research laboratories, academics and trusted analytical teams for independent testing and evaluation
- TMBPF is now one of the most researched substances in food contact materials

# VALPURE® V70: REGULATORY APPROVAL AND BEYOND

## Engage With Science Experts and Critics



## Food Contact and Chemical Regulatory Authorities



## Outreach to NGOs and Influential Third Parties



## Encourage Public Discussion Among Stakeholders



# THE NEED FOR INNOVATION IN THE COATING INDUSTRY

## Safety by Design

- Ensures products are developed to meet long-term scientific rigor
- Demonstrates that regulatory and performance challenges can be overcome
- Provides safe and sustainable solutions



# QUESTIONS?



# THANK YOU!

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