



HOW TO ACHIEVE VIBRANT COLORS WITH SULFONE POLYMERS IN HEALTHCARE APPLICATIONS

MARCH 30, 2022

SPEAKERS



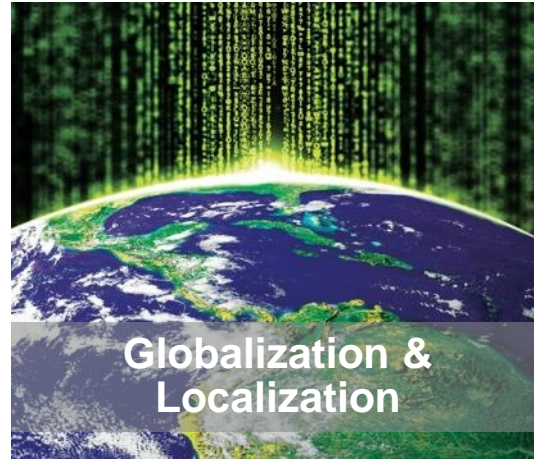
Dave Worrall is account manager, Americas, for Colorant Chromatics™ high performance polymers at Avient Corporation. He is responsible for the sales of both the Colorant Chromatics brand of fluoropolymers and high-performance polymer colorant and additive solutions. He has a diverse background with more than 20 years of sales and leadership experience, and has worked across a number of industries.



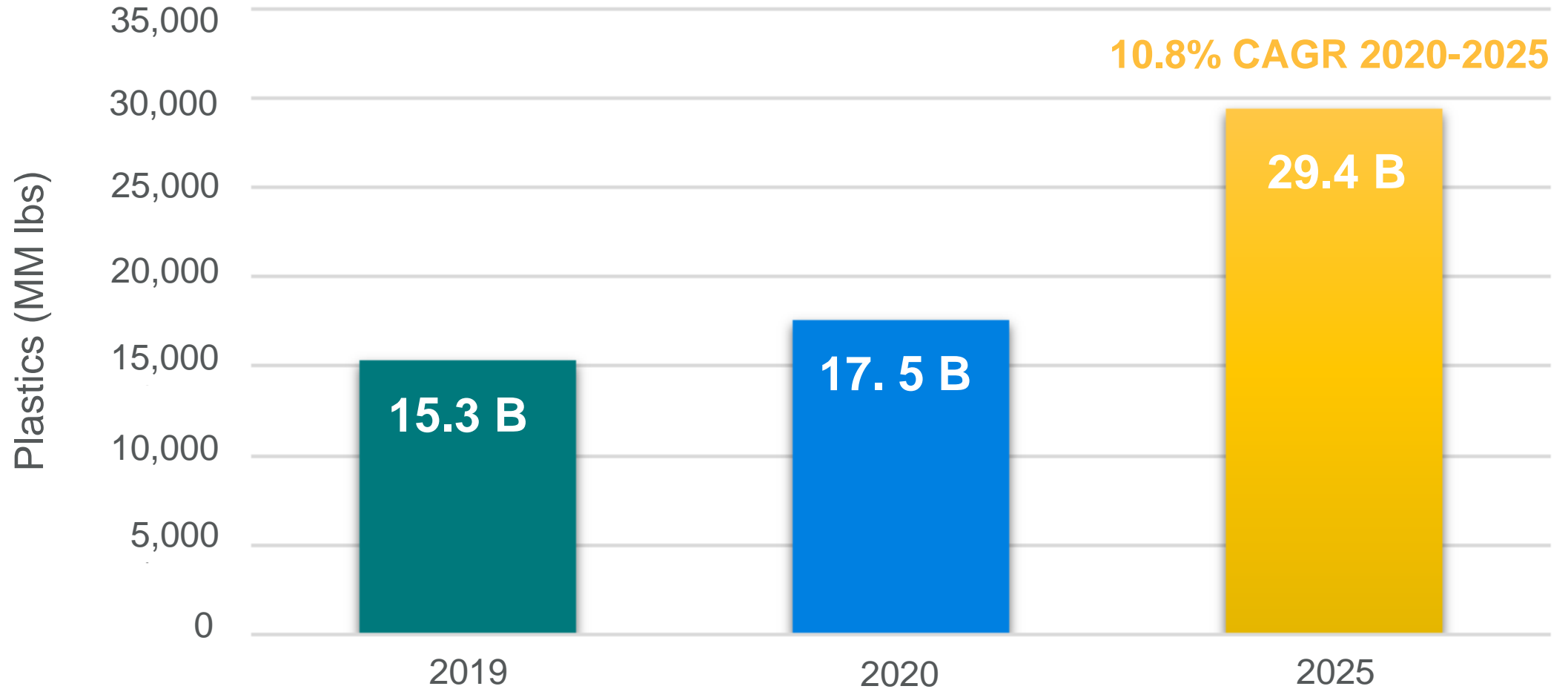
Jiao Guo is the ADTS engineer for Colorant Chromatics™ high-performance polymers at Avient Corporation. She is responsible for the application development and technical support for high-temperature polymers in North America, bridging the gap between customer market needs and internal technology competence. She gains rich experiences by working in various roles in technology from R&D to quick customer response. She has an in-depth understanding of the individual value chain within the polymer industry from resin supplier to OEM.

TRENDS IN HEALTHCARE

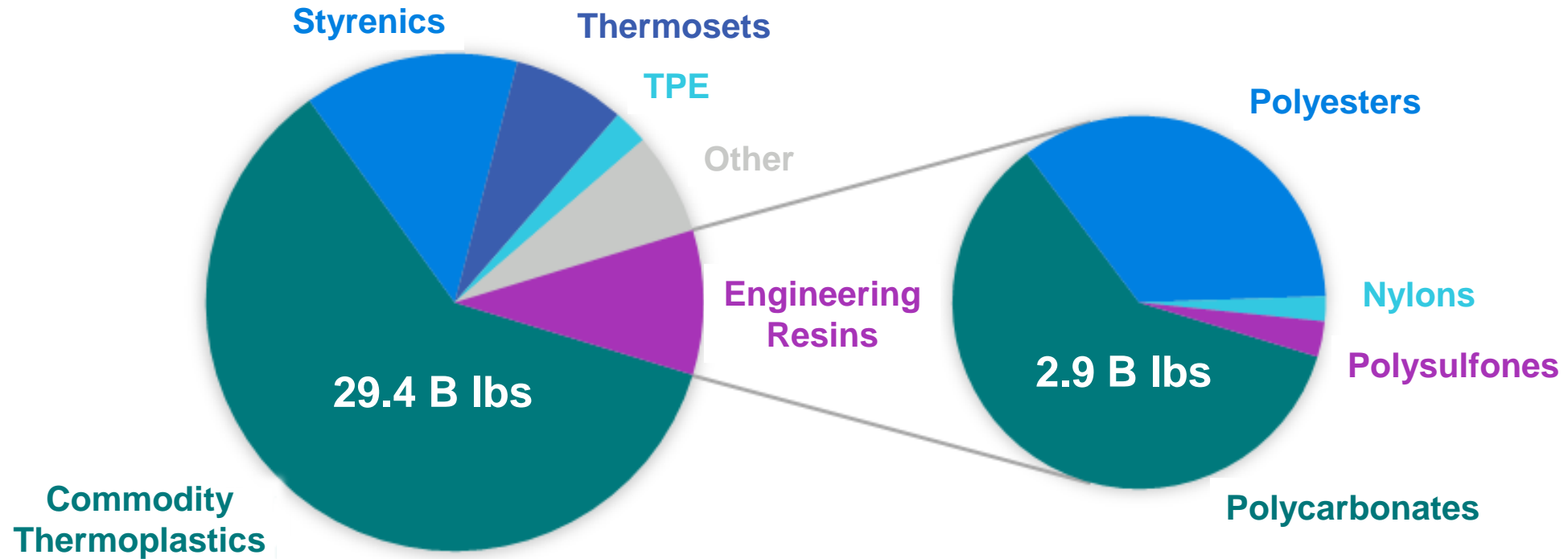
SHAPING INNOVATION & SOLUTIONS



GLOBAL HEALTHCARE PLASTICS MARKET



GLOBAL HEALTHCARE PLASTICS MARKET



Polysulfones are expected to grow to 85 MM lbs with a CAGR of 11% by 2025

TYPICAL APPLICATIONS

REQUIRING COLOR SOLUTIONS



SURGICAL INSTRUMENTS



MEDICAL EQUIPMENT
COMPONENTS AND IVD



BIOPHARMA PROCESSING AND
LIFE SCIENCES



OTHER

High performance and pleasing aesthetics are key

ADVANTAGES

SULFONE POLYMERS IN HEALTHCARE APPLICATIONS



Thermal and chemical resistance

- Extended product life
- Expanded reuse to support sustainability
- Sanitization flexibility with autoclave, steam, solvent

Amorphous / transparent resin

- Opaque and transparent options

Supply flexibility

- Multiple raw materials and suppliers in the market

CHALLENGES

SULFONE POLYMERS IN HEALTHCARE APPLICATIONS

Natural amber color

- Broad range of amber from various sources and grades of base resin
- Batch-to-batch color variation

High processing temperature

- Requires more specific and advanced colorant and additives
- Color changes due to thermal history from processing

Initial raw material cost

- Up to high performance polymer range



MARKET NEEDS

WHEN ADDING COLOR



- Provide a clean appearance
- Achieve more vibrant colors
- Access a breadth of color options
- Secure a balanced performance with color
- Ensure security with biological evaluation and testing
- Withstand high processing temperatures and harsh cleaning agents
- Manage market dynamics and inventory

RESPONDING TO MARKET NEEDS

Colorant and additive solutions

- Thermal stability
- Regulatory compliance

Process profile

- Optimized machine setup and parameters for best performance

Material handling

- QC for each step from raw material reception through shipping

Service

- Flexible order size and timely technical support

NEXT GENERATION SOLUTIONS

TRANSCEND™ PREMIER HEALTHCARE COLORANTS

- Brilliant, aesthetically pleasing colors
- Variety of choices for enhanced product design with processing flexibility
- ISO 10993 biocompatible



NEXT GENERATION SOLUTIONS

TRANSCEND™ PREMIER HEALTHCARE COLORANTS

Solutions

Brilliant, vibrant colors

Current

26 standard colors, 7 transparent colors

Next Up

Customized colors



NEXT GENERATION SOLUTIONS

TRANSCEND™ PREMIER HEALTHCARE COLORANTS



Solutions

Current

Next Up

Raw materials tested for ISO 10993 biocompatibility

Formulated in PPSU

All sulfone materials

Formulation expertise

Pre-color, concentrates, IR laser marking, mold release additives

Other functional additives

Added value

Low minimums, customized solutions, tech support

Advanced device design support

BIOCOMPATIBILITY + AESTHETICS

SURGICAL INSTRUMENT OEM TIBIAL TRIALS

AVIENT SOLUTION

Transcend™ Premier Healthcare Colorants

WHY AVIENT?

- Delivered a variety of bright, differentiating color choices
- Maintained excellent mechanical performance after repeated steam sterilization and harsh chemical cleaning
- Offered low MOQ with flexible supply

LEARN MORE

KEY REQUIREMENTS

- Offered in various colors for ease of brand identification and sizing differentiation
- Able to withstand repeated steam sterilization and chemical disinfection
- Available in low minimum order quantities (MOQ)

SURGICAL INSTRUMENT OEM DENTAL SCALER

AVIENT SOLUTION

Transcend™ Premier Healthcare Colorants

WHY AVIENT?

- Achieved a clean, bright white color that provided a more pleasing experience for patients
- Allowed scaler to be laser marked for brand identification
- Met the need for impact resistance and successfully passed the drop test requirements

LEARN MORE

KEY REQUIREMENTS

- Attain an extreme white color to appear hygienic and aesthetically pleasing
- Ability to laser mark the brand
- Maintain impact resistance

THE NEW AVIENT

ABOUT US



8,700
employees
worldwide



35,000+
solutions



\$4.8 billion
in sales



115
facilities in
35 countries

OUR SUSTAINABILITY MISSION

ENABLE OUR CUSTOMERS' INNOVATION AND SUSTAINABILITY GOALS THROUGH WORLD CLASS PRODUCTS AND SERVICES AND EXCELLENCE IN THE FOUR CORNERSTONES OF:

PEOPLE

PRODUCTS

PLANET

PERFORMANCE

*“Imagination is more important than knowledge.
The important thing is to never stop questioning.”
(Albert Einstein)*

THANK YOU!

QUESTIONS?

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