Table of Contents

FRONT MATTER
• List of Figures and Tables
• Foreword
• Disclaimer
• Acknowledgments
• Executive Summary

MAIN REPORT
• Introduction

PERTINENT SUBJECT MATTER FOR COATINGS PRACTITIONERS
• Chapter 1: Raw Material Feedstocks’ Dynamics and Trends
• Chapter 2: Coil Coatings
• Chapter 3: Powder Coatings
• Chapter 4: Global M&A Activity (2017–2019)
Table of Contents

ARCHITECTURAL | OEM | SPECIAL PURPOSE COATINGS

Architectural Coatings
• Chapter 5: Architectural Coatings

OEM Coatings
• Chapter 6: Automotive OEM Coatings
• Chapter 7: General Industrial Finishes
• Chapter 8: Other Transportation Coatings
• Chapter 9: Packaging Finishes
• Chapter 10: Wood Finishes

Special Purpose Coatings
• Chapter 11: Automotive Refinish Paint
• Chapter 12: Marine Coatings
• Chapter 13: Protective Coatings
Table of Contents

REGIONAL CHAPTERS

• Chapter 14: North America
• Chapter 15: Europe
• Chapter 16: Asia Pacific (APAC)
• Chapter 17: Latin America
• Chapter 18: Middle East and Africa (MEA)
LIST OF FIGURES AND TABLES
EXECUTIVE SUMMARY

- Figure ES-1: Multinational Coatings Manufacturers (2019 Sales)
- Figure ES-2: # of Deals Split By Volume (1990–2019)
- Figure ES-3: $ Billion Deals Split By Value (1990–2019)
- Figure ES-4: Coatings Volume by End Use (2019)
- Figure ES-5: Drivers & Restraints (2019)
- Figure ES-6: Architectural vs. OEM Volume Growth (2013–2019)
- Figure ES-7: Architectural vs. OEM Value Growth (2013–2019)
- Figure ES-8: Per Capita Demand by Region (2019 Liters)
- Figure ES-9: Historical GDP Growth by Country (2013, 2019)
- Figure ES-10: $11.4 T Construction Spending by Region (2018)
- Figure ES-11: APAC Technology Share by Market (2019)
- Figure ES-12: EU Technology Share by Market (2019)
- Figure ES-13: Latin America Technology Share by Market (2019)
- Figure ES-14: MEA Technology Share by Market (2019)
EXECUTIVE SUMMARY

• Figure ES-15: NA Technology Share by Market (2019)
• Figure ES-16: Global Coatings Market by Technology (2013–2020)
• Figure ES-17: Global Demand by Volume – % CAGR (2019–2024f)
• Figure ES-18: Global Demand by Value – % CAGR (2019–2024f)
• Figure ES-19: Historical and Forecast Volume/Value CAGR Growth
• Figure ES-20: Global Construction Headwinds/Tailwinds (2020–2040)
• Figure ES-21: Global Volume Demand by Market (2019–2024f)
• Figure ES-22: Global Value Demand by Market (2019–2024f)
• Figure ES-23: Global AC by Volume – % CAGR through 2024f
• Figure ES-24: Global AC by Value – % CAGR through 2024f
• Figure ES-25: Global OEM by Volume – % CAGR through 2024f
• Figure ES-26: Global OEM by Value – % CAGR through 2024f
• Figure ES-27: Global SP by Volume – % CAGR through 2024
EXECUTIVE SUMMARY

- Figure ES-28: Global SP by Value – % CAGR through 2024
- Figure ES-29: Architectural Coatings End-Use and Channel Analysis (2018)

- Table ES-1: Historical Global Volume by Market (2013–2019)
- Table ES-2: Historical Global Value by Market (2013–2019)
- Table ES-3: Metric | Results (2019)
- Table ES-4: GDP and Per Capita Spending Estimates (2019)
**List of Figures and Tables**

**CHAPTER 1: RAW MATERIAL FEEDSTOCKS’ DYNAMICS AND TRENDS**

- Figure 1-1: Global Coatings Raw Material Supply Chain & Key Players
- Figure 1-2: Petrochemical Feedstocks for the Paint and Coatings Industry
- Figure 1-3: Raw Material Input for a Typical Unit of Coatings
- Figure 1-4: Architectural Cost/Raw Material Breakdown
- Figure 1-5: Industrial Cost/Raw Material Breakdown
- Figure 1-6: U.S. Crude Oil & Natural Gas Production (2009–2019)
- Figure 1-7: GDP Elasticity Measures Market Growth Rate Relative to Global GDP Growth
- Figure 1-8: 2018 Ethylene Production & Consumption by Region
- Figure 1-9: Global Ethylene Capacity & Demand (2010–2024f)
- Figure 1-10: Global Marginal Ethylene Capacity Additions
- Figure 1-11: Global Ethylene Capacity Additions by Feedstock
List of Figures and Tables

CHAPTER 1: RAW MATERIAL FEEDSTOCKS’ DYNAMICS AND TRENDS (continued)

- Figure 1-12: Ethylene Feedslate Shift to Ethane and Propane
- Figure 1-13: Low-Cost Ethane Reduced U.S. Ethylene Prod Costs
- Figure 1-14: Forecast for Sustained Recovery of Ethylene Utilization
- Figure 1-15: 2018 NA Ethylene Capacity Outages
- Figure 1-16: 2019 NA Ethylene Capacity Outages
- Figure 1-17: Asia, SA, EU Imports vs. NA Exports (2012 to 2022)
- Figure 1-18 NA Ethylene Producers Share
- Figure 1-19: Global Ethylene Producers Share
- Figure 1-20: Ethylene End Uses (2019)
- Figure 1-21: Ethylene Demand by Derivative (2019 vs. 2029)
- Figure 1-22: Ethylene vs. Ethane and Naphtha (2009–2019)
- Figure 1-23: Ethylene Regional Price Forecast ($/mt)
- Figure 1-24: 2018 Propylene Production & Consumption by Region
- Figure 1-25: Global Propylene Production by Technology
CHAPTER 1: RAW MATERIAL FEEDSTOCKS’ DYNAMICS AND TRENDS (continued)

- Figure 1-26: Propylene Capacity Led by Asia
- Figure 1-27: Global Propylene Capacity & Demand (2010–2024f)
- Figure 1-28: Global PDH and FCC Propylene Operating Rates
- Figure 1-29: Capacity Additions By Technology
- Figure 1-30: Total NA Propylene Exports thru 2022
- Figure 1-31: North America Propylene Producers
- Figure 1-32: Global Propylene Producers
- Figure 1-33: Largest North American Propylene Sellers & Buyers (Excluding Captive)
- Figure 1-34: Global & U.S. Propylene End Uses
- Figure 1-35: Propylene Demand by Derivative (2019 vs. 2029)
- Figure 1-36: Incremental Propylene Capacity and Demand Changes
- Figure 1-37: Propylene Regional Price Forecast ($/mt)
- Figure 1-38: Market Volume of Phenols Worldwide (MM Tons)
- Figure 1-39: Phenol Supply-Demand (k ton)
List of Figures and Tables

CHAPTER 1: RAW MATERIAL FEEDSTOCKS’ DYNAMICS AND TRENDS (continued)

• Figure 1-40: Phenol Nameplate Capacity (Mn tons) by Producer
• Figure 1-41: 2018 Phenol End Uses
• Figure 1-42: Phenol vs. Benzene Prices
• Figure 1-43: Phenol Demand By Downstream Product (K ton)
• Figure 1-44: BPA Consumption 2015 vs. 2020
• Figure 1-45: Bisphenol-A End Uses
• Figure 1-46: Global Raw Materials of Epoxy Resins (Volume/Value)
• Figure 1-47: Global Epichlorohydrin Capacity (000 tonnes)
• Figure 1-48: China ECH Capacity & Demand (2010–2018)
• Figure 1-49: Global Epichlorohydrin End Uses
• Figure 1-50: U.S. Epichlorohydrin End Uses by Value
• Figure 1-51: MDI (Methylene Diphenyl Diisocyanate) and TDI (Toluene Diisocyanate): Highly Consolidated Chains With Significant Barriers To Entry
• Figure 1-52: MDI Outlook (ktpa, %)
List of Figures and Tables

CHAPTER 1: RAW MATERIAL FEEDSTOCKS’ DYNAMICS AND TRENDS (continued)

- Figure 1-53: TDI Outlook (ktpa, %)
- Figure 1-54: Top Five MDI Makers
- Figure 1-55: Top Five TDI Makers
- Figure 1-56: Global MDI & TDI Capacity Shares
- Figure 1-57: China MDI & TDI Supply and Demand
- Figure 1-58: Chemical Product Exports Now Severely Affected by China-U.S. Trade Friction
- Figure 1-59: MDI End Uses
- Figure 1-60: TDI End Uses
- Figure 1-61: Leading the Capacity Expansion Cycle
- Figure 1-62: MDI Downstream Demand Estimates for China (kt)
- Figure 1-63: MDI Downstream Demand for China Growth Estimate
- Figure 1-64: MDI Prices Expected to Bottom Out in 2020
- Figure 1-65: TDI Europe ($/mt)
- Figure 1-66: TDI China (Spot Price Huadong in $/mt)
CHAPTER 1: RAW MATERIAL FEEDSTOCKS’ DYNAMICS AND TRENDS (continued)

- Figure 1-67: Styrene Demand by Derivative & End-Market
- Figure 1-68: China Leads Styrene Capacity Expansion
- Figure 1-69: U.S. Styrene Exports
- Figure 1-70: Styrene Pricing Volatility
- Figure 1-71: Butadiene Capacity Vs. Demand Growth
- Figure 1-72: Regional Demand
- Figure 1-73: Forecast for New Capacities
- Figure 1-74: Europe Will Remain Net Exporter of Butadiene: Domestic Supply Meets Demand
- Figure 1-75: North America Not a Pure Net Exporter Despite Steady Growth
- Figure 1-76: NA Butadiene Supply Demand (‘000 MM Tons)
- Figure 1-77: NA Butadiene Capacity vs Operating Rate (‘000 MM Tons)
- Figure 1-78: Styrene Demand by Derivative & End-Market
- Figure 1-79: Recent Butadiene Pricing Volatility Forecasted to Stabilize
- Figure 1-80: Regional Butadiene Prices (June 2017 = 100%)
CHAPTER 1: RAW MATERIAL FEEDSTOCKS’ DYNAMICS AND TRENDS (continued)

- Figure 1-81: Butadiene Price Forecast
- Figure 1-82: Global Acrylic Acid Consumption by Region
- Figure 1-83: Acrylic Acid Demand Growth (% Volume Growth)
- Figure 1-84: Global Acrylic Acid Supply & Demand (‘000 tons)
- Figure 1-85: Acrylic Acid Growth by End Use (% Volume Growth)
- Figure 1-86: Acrylic Acid Net Trade
- Figure 1-87: Global VAM Market by Volume (Kilotons)
- Figure 1-88: Global VAM Market by Value ($ MM)
- Figure 1-89: U.S. VAM Market Size by Application by Value
- Figure 1-90: Vinyl Acetate Monomer (VAM) Price History
- Figure 1-91: Specialty Polymers, Additives Among Fastest Growing Markets in Specialty Chemicals
- Figure 1-92: Coatings Additives
- Figure 1-93: Coatings Raw Materials by Value
- Figure 1-94: Coatings Raw Materials by Volume
CHAPTER 1: RAW MATERIAL FEEDSTOCKS’ DYNAMICS AND TRENDS (continued)

- Figure 1-95: TiO2 Supply / Demand
- Figure 1-96: TiO2 End Markets (2018)
- Figure 1-97: Global TiO2 Producers
- Figure 1-98: Global TiO2 Price Forecast ($/mt)

- Table 1-1: Energy & Feedstock Price History and Outlook
- Table 1-2: Key North American Chemical Price Outlook
- Table 1-3: North American Ethylene/Polyethylene Pricing Forecast (cents/lb)
List of Figures and Tables

CHAPTER 2: COIL COATINGS

- Figure 2-1: Coil Coatings Volume
- Figure 2-2: Coil Coatings Value
- Figure 2-3: Volume/Value of Coil Coatings (2013–2024f)
- Figure 2-4: Regional Distribution of Volume and Value (2019)
- Figure 2-5: End-Use Estimates by Volume (2019)
- Figure 2-6: Global Construction Spending by Region (2018)
- Figure 2-7: Trade Patterns of Manufactured Goods by Region (2018)
- Figure 2-8: Regional Coil Technology Share by Volume (2019)

- Table 2-1: Volume, Value, Price Growth (2013–2024f)
- Table 2-2: Examples of Regional Suppliers (2019)
List of Figures and Tables

CHAPTER 3: POWDER COATINGS

• Figure 3-1: Powder Coatings Volume
• Figure 3-2: Powder Coatings Value
• Figure 3-3: Volume/Value of Powder Coatings (2013–2024f)
• Figure 3-4: Regional Distribution of Volume and Value
• Figure 3-5: 2019 Ranking of Largest EU Coatings Producers
• Figure 3-6: End-Use Estimates by Volume (2019)
• Figure 3-7: Trade Patterns of Manufactured Goods by Region (2018)
• Figure 3-8: Global Powder Technology Type by Volume (2019)
• Figure 3-9: Powder Coatings Volume Share by Region (2019)
• Figure 3-10: Powder Coatings Resin Share by Volume (2019)
• Figure 3-11: Buying Factors by End Use
CHAPTER 3: POWDER COATINGS (continued)
• Table 3-1: Volume, Value, Price Growth (2013–2024f)
• Table 3-2: Examples of Regional Suppliers (2019)
• Table 3-3: Powder Coatings Characteristics

• Figure 4-1: # of Deals Split By Volume (1990–2019)
• Figure 4-2: $ Billion Deals Split By Value (1990–2019)
• Figure 4-3: Acquisitions since January 2005
• Figure 4-4: Deals Led By 5 Top Acquirers (2013–2019)
• Figure 4-5: Acquisitions by Firms
• Figure 4-6: Acquisitions by Region Since 2013
• Figure 4-7: *Global Coatings—Organic Vs. Inorganic Growth

- Table 4-1: Key Coatings Acquisitions, 2008–2017 ($ Billions)
- Table 4-2: M&A Transactions
- Table 4-3: M&A Transactions
- Table 4-4: M&A Transactions
- Table 4-5: M&A Transactions
- Table 4-6: M&A Transactions
- Table 4-7: M&A Transactions
- Table 4-8: M&A Transactions
- Table 4-9: M&A Transactions
- Table 4-10: M&A Transactions
- Table 4-11: M&A Transactions
- Table 4-12: M&A Transactions
- Table 4-13: M&A Transactions
- Table 4-14: M&A Transactions
**List of Figures and Tables**

**CHAPTER 5: ARCHITECTURAL COATINGS**

- Figure 5-1: Architectural Coatings Volume
- Figure 5-2: Architectural Coatings Value
- Figure 5-3: Volume/Value of Architectural Coatings (2013–2024f)
- Figure 5-4: Regional Distribution of Volume and Value (2019)
- Figure 5-5: Multinational Coatings Manufacturers (2019 Sales)
- Figure 5-6: Historical GDP Growth by Country (2013, 2019)
- Figure 5-7: $11.4 T Construction Spending by Region (2018)
- Figure 5-8 Global Construction Headwinds/Tailwinds (2020–2040)
- Figure 5-9: Forecast GDP and Population Growth by Region (2019–2024f)
- Figure 5-10: Coatings Demand vs. GDP Per Capita by Region (2019)
- Figure 5-11: Coatings Demand vs. GDP Per Capita by Region (2024f)
- Figure 5-12: Distribution Channel Share by Region (2019)
- Figure 5-13: Customer Segmentation by Region (2019)
- Figure 5-14: Regional AC Technology Share by Volume (2019)
CHAPTER 5: ARCHITECTURAL COATINGS (continued)

- Table 5-1: Volume, Value, Price Growth (2013–2024f)
- Table 5-2: Examples of Regional Suppliers

CHAPTER 6: AUTOMOTIVE OEM COATINGS

- Figure 6-1: Automotive Coatings Volume
- Figure 6-2: Automotive Coatings Value
- Figure 6-3: Volume/Value of Automotive Coatings (2013–2024f)
- Figure 6-4: Regional Distribution of Volume and Value (2019)
- Figure 6-5: Forecast Production Growth by Region (2018–2023)
- Figure 6-6: Imports of NAICS 3361 - Motor Vehicles (2019)
- Figure 6-7: Regional Auto OEM Technology Share by Volume (2019)
- Figure 6-8: Global Color Preferences (2019)
CHAPTER 6: AUTOMOTIVE OEM COATINGS (continued)

- Table 6-1: Volume, Value, Price Growth (2013–2024f)
- Table 6-2: Examples of Regional Suppliers
- Table 6-3: Vehicle Production by Region (2018)

CHAPTER 7: GENERAL INDUSTRIAL FINISHES

- Figure 7-1: General Industrial Finishes Volume
- Figure 7-2: General Industrial Finishes Value
- Figure 7-3: Volume/Value of Gen Industrial Finishes (2013–2024f)
- Figure 7-4: Regional Distribution of Volume and Value (2019)
- Figure 7-5: Global Quarterly Index on Select Agricultural Equipment Shipments (2010–2018)
- Figure 7-6: Global Agricultural Equipment Demand by Product Type
- Figure 7-7: Global Agricultural Equipment Production by Region
- Figure 7-8: Ag & Turf Industry Outlook (FY 2020)
CHAPTER 7: GENERAL INDUSTRIAL FINISHES (continued)

- Figure 7-9: U.S. End-Use Value Estimates by Coating Type (2019)
- Figure 7-10: Other Machinery Exports by Region (2014–2017)
- Figure 7-11: Exports of Office/Telecom Equip by Region (Value)
- Figure 7-12: Exports of Office/Telecom Equip by Subsegment (2018)
- Figure 7-13: U.S. Imports of Office Furniture and Fixtures by Value
- Figure 7-14: U.S. Imports of IT/Electronic Products by Value
- Figure 7-15: Regional OEM Technology Share by Volume (2019)
- Figure 7-16: Modern Office Furniture and Phone Colors (2019)

- Table 7-1: Volume, Value, Price Growth (2013–2024f)
- Table 7-2: Examples of Regional & Local Suppliers
- Table 7-3: Smart Coatings Forecast
CHAPTER 8: OTHER TRANSPORTATION COATINGS

- Figure 8-1: Other Transportation Coatings Volume
- Figure 8-2: Other Transportation Coatings Value
- Figure 8-3: Volume/Value of Other Transp. Coatings (2013–2024f)
- Figure 8-4: Regional Distribution of Volume and Value (2019)
- Figure 8-5: HD Trucks Production Growth by Region (2013 –2018)
- Figure 8-6: Global HD Truck, Bus and Coach Production (2013–2019)
- Figure 8-7: Commercial Sector’s 2019 Backlog Value (June 2019)
- Figure 8-8: Market Build Rates (2014–2022)
- Figure 8-9: Commercial’s Projected Fleet Size (2018–2037)
- Figure 8-10: Value of Aerospace Imports (2014–2019)
- Figure 8-11: Value of Aerospace Exports (2014–2019)
- Figure 8-12: Total World Imports to U.S. by Value (2014–2019)
- Figure 8-13: Regional OTC Technology Share by Volume (2019)
- Figure 8-14: Conventional System vs. New High Solids Technology
CHAPTER 8: OTHER TRANSPORTATION COATINGS (continued)

• Figure 8-15: U.S. HD Truck Technology Share by Value (2019)
• Table 8-1: Volume, Value, Price Growth (2013–2024f)
• Table 8-2: Examples of Regional Suppliers (2019)
• Table 8-3: 2019 Orders and Deliveries (April 2019)
• Table 8-4: U.S. Heavy and Medium-Duty Trucks Technology Share (2019)

CHAPTER 9: PACKAGING FINISHES

• Figure 9-1: Packaging Finishes Volume
• Figure 9-2: Packaging Finishes Value
• Figure 9-3: Volume/Value of Packaging Finishes (2013–2024f)
• Figure 9-4: Regional Distribution of Volume and Value (2019)
CHAPTER 9: PACKAGING FINISHES

• Figure 9-5: End-Use Estimates by Volume (2019)
• Figure 9-6: Flexible Packaging End Uses (2019)
• Figure 9-7: Packaging (Machinery) Shipments by End Use (2018)
• Figure 9-8: Packaging PP Volume Production by Region (2018)
• Figure 9-9: Packaging Paper, Paperboard Volume Production (2018)
• Figure 9-10: Packaging Paper, Paperboard Imports by Volume (2018)
• Figure 9-11: Packaging Paper, Paperboard Exports by Volume (2018)
• Figure 9-12: Regional Pkg. Technology Share by Volume (2019)

• Table 9-1: Volume, Value, Price Growth (2013–2024f)
• Table 9-2: Examples of Regional Suppliers
• Table 9-3: Market Trends and Drivers
CHAPTER 10: WOOD FINISHES

• Figure 10-1: Wood Finishes Volume
• Figure 10-2: Wood Finishes Value
• Figure 10-3: Volume/Value of Wood Finishes (2013–2024f)
• Figure 10-4: Regional Distribution of Volume and Value (2019)
• Figure 10-5: Global End-Use Estimates by Volume (2019–2024f)
• Figure 10-6: Average New Home Size by Select Countries (ft²)
• Figure 10-7: Imports of Veneer, Plywood & Engineered Wood Products
• Figure 10-8: Regional Wood Technology Share by Volume (2019)
• Figure 10-9: Wood Additives Development for Improved Durability

• Table 10-1: Volume, Value, Price Growth (2013–2024f)
• Table 10-2: Examples of Regional Suppliers
CHAPTER 11: AUTOMOTIVE REFINISH PAINT

• Figure 11-1: Automotive Refinish Paint Volume
• Figure 11-2: Automotive Refinish Paint Value
• Figure 11-3: Volume/Value of Auto Refinish Paint (2013–2024f)
• Figure 11-4: Regional Distribution of Volume and Value (2019)
• Figure 11-5: Vehicles Produced/1,000 people (2018)
• Figure 11-6: Vehicles in Use by Region (2019)
• Figure 11-7: New Car Sales Sold to Lessor Fleets by Region (2019)
• Figure 11-8: Fatal Accidents by Countries’ Income Level
• Figure 11-9: Regional Refinish Technology Share by Volume (2019)

• Table 11-1: Volume, Value, Price Growth (2013–2024f)
• Table 11-2: Examples of Regional Suppliers (2019)
CHAPTER 12: MARINE COATINGS

- Figure 12-1: Marine Coatings Volume
- Figure 12-2: Marine Coatings Value
- Figure 12-3: Volume/Value of Marine Coatings (2013–2024f)
- Figure 12-4: Regional Distribution of Volume and Value (2019)
- Figure 12-5: Fleet Market Size by Region of Ownership (2019)
- Figure 12-6: Top Merchant Fleet Owners by Country (2019)
- Figure 12-7: Building, Ownership, Registration and Scrapping of Ships (2017)
- Figure 12-8: World Fleet Share by Subsegment (2019)
- Figure 12-9: Regional Marine Technology Share by Volume (2019)
List of Figures and Tables

CHAPTER 12: MARINE COATINGS (continued)

- Table 12-1: Volume, Value, Price Growth (2013–2024f)
- Table 12-2: Share of Shipbuilding by Country (2016–2018)
- Table 12-3: Examples of Regional Suppliers
- Table 12-4: Growth of World Seaborne Trade by Region (2018)

CHAPTER 13: PROTECTIVE COATINGS

- Figure 13-1: Protective Coatings Volume
- Figure 13-2: Protective Coatings Value
- Figure 13-3: Volume/Value of Protective Coatings (2013–2024f)
- Figure 13-4: Regional Distribution of Volume and Value (2019)
- Figure 13-5: Global Oil & Gas Rig Count (2008–2018)
- Figure 13-6 Oil & Gas Value Chain
List of Figures and Tables

CHAPTER 13: PROTECTIVE COATINGS (continued)

- Figure 13-7: World Liquid Fuels Production/Consumption Balance
- Figure 13-8: Oilfield Service Growth by Resource Type (2017–2019)
- Figure 13-9: Natural Gas Production
- Figure 13-10: Global Oil Production by Region (2018)
- Figure 13-11: Global Mining Exploration Spend ($ billion)
- Figure 13-12: Diversified Miners’ CAPEX Forecast
- Figure 13-13: Forecasted U.S. & Canada Heavy Industry Activity
- Figure 13-14: Regional Infrastructure Needs ($ billion) (2016-2040)
- Figure 13-15: World Merchandise Trade by Destination (2018)
- Figure 13-16: Regional PC Technology Share by Volume (2019)
- Figure 13-17: Polyurethane Coating Technology Currently Dominates in O&G (2018)
- Figure 13-18: No Dominate Coating Technology in “High Value” Infrastructure Applications
- Figure 13-19: Epoxy Coatings Technology Is Favored in Food/Beverage; Polyurethane Follows
- Figure 13-20: Polyurethane Technologies Dominate in Highway & Bridge
CHAPTER 13: PROTECTIVE COATINGS (continued)

- Figure 13-21: Polyurethane Is only Slightly Favored in Water & Wastewater
- Figure 13-22: Marine Energy Market Has Growth Potential

- Table 13-1: Volume, Value, Price Growth (2013–2024f)
- Table 13-2: Examples of Regional Suppliers
- Table 13-3: Technology Type Buying Factors (2018)
List of Figures and Tables

CHAPTER 14: NORTH AMERICA (NA)

- Figure 14-1: North America Volume
- Figure 14-2: North America Value
- Figure 14-3: NA Coatings Market (2013–2024f)
- Figure 14-4: NA Volume Demand (2013–2019)
- Figure 14-5: NA Value Demand (2013–2019)
- Figure 14-6: NA Volume Demand (2019–2024f)
- Figure 14-7: NA Value Demand (2019–2024f)
- Figure 14-8: Regional Distribution of Volume and Value (2019)
- Figure 14-9: Multinational Coatings Manufacturers (2019 Sales)
- Figure 14-10: End-Use Estimates by Volume (2019)
- Figure 14-11: Regional GDP Growth Forecast (2014–2024f)
- Figure 14-12: Coatings Growth Vs. Construction Spending
- Figure 14-13: National Defense Annual Spending (2014–2019)
- Figure 14-14: Annual Leading Product Exports ($ MM)
List of Figures and Tables

CHAPTER 14: NORTH AMERICA (continued)

- Figure 14-15: Annual Leading Product Imports ($ MM)
- Figure 14-16: North America Technology Share by Volume (2019)
- Figure 14-17: “Circular Economy” Illustrated
- Figure 14-18: Companies Reporting Sustainability Outcomes
- Figure 14-19: Chemicals Management Framework
- Figure 14-20: Volume/Value CAGR (2013–2019)
- Figure 14-21: Volume/Value CAGR (2019–2024f)

- Table 14-1: Volume, Value, Price Growth (2013–2024f)
- Table 14-2: Canadian Coatings Market By Region (2019)
- Table 14-3: Examples of NA-Based Coating Manufacturers
- Table 14-4: GDP and Per Capita Spending Estimates (2019)
- Table 14-5: Coatings Usage Vs. Construction Spending (2009-2019)
List of Figures and Tables

CHAPTER 14: NORTH AMERICA (continued)

- Table 14-6: Cost of Coating Materials by Function (2019)
- Table 14-7: Notable Players in Sustainability/ESG
- Table 14-8: SASB Universe of Sustainability Issues
- Table 14-9: Completed RTRs
- Table 14-10: Unfinished RTRs with Pending Completion Date
- Table 14-11: North America Coatings Historical Volume by Country and End-Use Segment (2013)
- Table 14-12: North America Coatings Historical Value by Country and End-Use Segment (2013)
- Table 14-13: North America Coatings Historical Volume by Country and End-Use Segment (2019)
- Table 14-14: North America Coatings Historical Value by Country and End-Use Segment (2019)
- Table 14-15: North America Coatings Forecasted Volume by Country and End-Use Segment (2024f)
- Table 14-16: North America Coatings Forecast Value by Country and End-Use Segment (2024f)
CHAPTER 15: EUROPE (EU)

- Figure 15-1: Europe Volume
- Figure 15-2: Europe Value
- Figure 15-3: EU Coatings Market (2013–2024f)
- Figure 15-4: EU Volume Demand (2013–2019)
- Figure 15-5: EU Value Demand (2013–2019)
- Figure 15-6: EU Volume Demand (2019–2024f)
- Figure 15-7: EU Value Demand (2019–2024f)
- Figure 15-8: Regional Distribution of Volume and Value (2019)
- Figure 15-9: End-Use Estimates by Volume (2019)
- Figure 15-10: 5-Year Profile of EU Vehicle Production (MM units)
- Figure 15-11: Annual Leading Product Exports ($ MM)
- Figure 14-12: Annual Leading Product Imports ($ MM)
- Figure 14-13: Europe Technology Share by Volume (2019)
CHAPTER 15: EUROPE (continued)

- Figure 15-14: Volume/Value CAGR (2013–2019)
- Figure 15-15: Volume/Value CAGR (2019–2024f)
- Figure 15-16: 10-Year Real GDP Forecast (2020–2030 CAGR)

- Table 15-1: Volume, Value, Price Growth (2013–2024f)
- Table 15-2: Country Definitions
- Table 15-3: Local European Paint Companies (2019)
- Table 15-4: GDP and Per Capita Spending Estimates (2019)
- Table 15-5: Regional GDP Growth Forecasts (2013–2024f)
- Table 15-6: Europe Coatings Historical Volume by Country and End-Use Segment (2013)
- Table 15-7: Europe Coatings Historical Value by Country and End-Use Segment (2013)
- Table 15-8: Europe Coatings Historical Volume by Country and End-Use Segment (2019)
- Table 15-9: Europe Coatings Historical Value by Country and End-Use Segment (2019)
List of Figures and Tables

CHAPTER 15: EUROPE (continued)

- Table 15-10: Europe Coatings Forecasted Volume by Country and End-Use Segment (2024f)
- Table 15-11: Europe Coatings Forecast Value by Country and End-Use Segment (2024f)

CHAPTER 16: ASIA PACIFIC (APAC)

- Figure 16-1: Asia Pacific Volume
- Figure 16-2: Asia Pacific Value
- Figure 16-3: APAC Coatings Market (2013–2024f)
- Figure 16-4: APAC Volume Demand (2013–2019)
- Figure 16-5: APAC Value Demand (2013–2019)
- Figure 16-6: APAC Volume Demand (2019–2024f)
- Figure 16-7: APAC Value Demand (2019–2024f)
- Figure 16-8: Regional Distribution of Volume and Value (2019)
CHAPTER 16: ASIA PACIFIC (continued)

- Figure 16-9: End-Use Estimates by Volume (2019)
- Figure 16-10: Highest Priced Regional Products by Segment
- Figure 16-11: Lowest Priced Regional Products by Segment
- Figure 16-12: Regional GDP (2013–2019)
- Figure 16-13: Regional GDP (2019–2024f)
- Figure 16-14: Annual Leading Product Exports ($ MM)
- Figure 16-15: Annual Leading Product Imports ($ MM)
- Figure 16-16: Asia Pacific Technology Share by Volume (2019)
- Figure 16-17: Volume/Value CAGR (2013–2019)
- Figure 16-18: Volume/Value CAGR (2019–2024f)
- Figure 16-19: 10-Year Real GDP Forecast (2020–2030 CAGR)
List of Figures and Tables

CHAPTER 16: ASIA PACIFIC (continued)

• Table 16-1: Volume, Value, Price Growth (2013–2024f)
• Table 16-2: Country Definitions
• Table 16-3: Local Asia Pacific Paint Companies (2019)
• Table 16-4: GDP and Per Capita Spending Estimates (2019)
• Table 16-5: Production Overview for Automotive Sector (2013, 2018)
• Table 16-6: Industry Output and GDP Growth by Country (2019)
• Table 16-7: Asia Pacific Coatings Historical Volume by Country and End-Use Segment (2013)
• Table 16-8: Asia Pacific Coatings Historical Value by Country and End-Use Segment (2013)
• Table 16-9: Asia Pacific Coatings Historical Volume by Country and End-Use Segment (2019)
• Table 16-10: Asia Pacific Coatings Historical Value by Country and End-Use Segment (2019)
• Table 16-11: Asia Pacific Coatings Forecasted Volume by Country and End-Use Segment (2024f)
• Table 16-12: Asia Pacific Coatings Forecast Value by Country and End-Use Segment (2024f)
List of Figures and Tables

CHAPTER 17: LATIN AMERICA (LA)

• Figure 17-1: Latin America Volume
• Figure 17-2: Latin America Value
• Figure 17-3: Latin America Coatings Market (2013–2024f)
• Figure 17-4: Latin America Volume Demand (2013–2019)
• Figure 17-5: Latin America Value Demand (2013–2019)
• Figure 17-6: Latin America Volume Demand (2019–2024f)
• Figure 17-7: Latin America Value Demand (2019–2024f)
• Figure 17-8: Regional Distribution of Volume and Value (2019)
• Figure 17-9: End-Use Estimates by Volume (2019)
• Figure 17-10: Annual Leading Product Exports ($ MM)
• Figure 17-11: Annual Leading Product Imports ($ MM)
• Figure 17-12: Latin America Technology Share by Volume (2019)
CHAPTER 17: LATIN AMERICA (continued)

- Table 17-1: Volume, Value, Price Growth (2013–2024f)
- Table 17-2: Country Definitions for Subregions
- Table 17-3: Local Latin America Paint Companies (2019)
- Table 17-4: GDP and Per Capita Spending Estimates (2019)
- Table 17-5: Regional GDP (2019–2024f)
- Table 17-6: Production Overview for Automotive Sector (2013, 2018)
- Table 17-7: Annual Increase in Production and GDP (2019)
- Table 17-8: Latin America Coatings Historical Volume by Country and End-Use Segment (2013)
- Table 17-9: Latin America Coatings Historical Value by Country and End-Use Segment (2013)
- Table 17-10: Latin America Coatings Historical Volume by Country and End-Use Segment (2019)
- Table 17-11: Latin America Coatings Historical Value by Country and End-Use Segment (2019)
- Table 17-12: Latin America Coatings Forecasted Volume by Country and End-Use Segment (2024f)
- Table 17-13: Latin America Coatings Forecast Value by Country and End-Use Segment (2024f)
List of Figures and Tables

CHAPTER 18: MIDDLE EAST AND AFRICA (MEA)

• Figure 18-1: Middle East and Africa Volume
• Figure 18-2: Middle East and Africa Value
• Figure 18-3: MEA Coatings Market (2013–2024f)
• Figure 18-4: MEA Volume Demand (2013–2019)
• Figure 18-5: MEA Value Demand (2013–2019)
• Figure 18-6: MEA Volume Demand (2019–2024f)
• Figure 18-7: MEA Value Demand (2019–2024f)
• Figure 18-8: Regional Distribution of Volume and Value (2019)
• Figure 18-9: End-Use Estimates by Volume (2019)
• Figure 18-10: Annual Leading Product Exports ($ MM)
• Figure 18-11: Annual Leading Product Imports ($ MM)
• Figure 18-12: MEA Technology Share by Volume (2019)
List of Figures and Tables

CHAPTER 18: MIDDLE EAST AND AFRICA (continued)

- Table 18-1: Volume, Value, Price Growth (2013–2024f)
- Table 18-2: Country Definitions
- Table 18-3: Examples of Regional Suppliers
- Table 18-4: GDP and Per Capita Spending Estimates (2019)
- Table 18-6: Production Overview for Automotive Sector (2013, 2018)
- Table 18-7: Annual Increase in Production and GDP (2019)
- Table 18-8: Latin America Coatings Historical Volume by Country and End-Use Segment (2013)
- Table 18-9: Latin America Coatings Historical Value by Country and End-Use Segment (2013)
- Table 18-10: Latin America Coatings Historical Volume by Country and End-Use Segment (2019)
- Table 18-11: Latin America Coatings Historical Value by Country and End-Use Segment (2019)
- Table 18-12: Latin America Coatings Forecasted Volume by Country and End-Use Segment (2024f)
- Table 18-13: Latin America Coatings Forecast Value by Country and End-Use Segment (2024f)