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Viscosity Relationships; 6.3 Viscosity as a Function of Temperature; 6.4 Evaporation; 6.5 Solvent Composition and Evaporation Time; 6.6 Solubility; 6.7 Surface Tension and Wetting; 6.8 N-Methyl-2-Pyrolidone (NMP); 6.9 Conductivity; 6.10 Flash Point and Autoignition; 6.11 Summary; REFERENCES; Chapter 7. Additives; 7.1 Introduction; 7.2 Abrasion Resistance Improvers, Antislip Aids; 7.3 Acid Catalysts; 7.4 Acid Scavengers; 7.5 Adhesion Promoters, Coupling Agents; 7.6 Algaecides, Biocides, Fungicides
7.7 Anti-Cratering Agent, Fisheye Preventer7.8 Anti-Crawling Agent; 7.9 Anti-Foaming Agent, Defoamer; 7.10 Anti-Fouling Agent; 7.11 Rust Inhibitor, Corrosion Inhibitor, Flash Rust Inhibitor; 7.12 Anti-Sag Agent, Colloidal Additives, Thickeners, Rheology Modifiers; 7.13 Anti-Settling Agent; 7.14 Antistatic Agent, Electroconductive Additives; 7.15 Coalescents, Coalescing Agent, Film Forming Agent; 7.16 Deaerators; 7.17 Degassing Agent; 7.18 Dispersant, Dispersing Agent, or Surfactant; 7.19 Flattening Agents; 7.20 UV Absorbers and Stabilizers; 7.21 Lubricants; 7.22 Moisture Scavenger
7.23 pH Control Agent7.24 Summary; REFERENCES; Chapter 8. Substrates and Substrate Preparation; 8.1 Introduction; 8.2 Substrates; 8.3 Substrate Preparation; 8.4 Substrate Characterization; 8.5 Summary; REFERENCES; Chapter 9. Liquid Formulations; 9.1 Introduction; 9.2 Selecting Ingredients; 9.3 Recipes and Formulas; 9.4 Formulating Water-Based Coatings; 9.5 Solvent-Based Coatings; 9.6 Soluble Fluoropolymers; 9.7 Mixing Liquid Coatings Prior to Use; 9.8 Filtering/straining; 9.9 Shelf Life; 9.10 Commercial Producers and Their Product Lines; REFERENCES; Chapter 10. Application of Liquid Coatings 10.1 Introduction

Sommario/riassunto

The Handbook of Fluorinated Coatings and Finishes: The Definitive User's Guide is both a reference and a tutorial for understanding fluoropolymer coatings. It discusses the basics of fluorocoating formulations, including ingredients and production processes. Also covered are the coating and curing processes, and defects and trouble-shooting solutions when things do not work as expected, testing performance, and sample commercial applications. It addresses important questions frequently posed by end-user design engineers, coaters, and coatings suppliers in their quest for superior product quali

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""4 Evolving to Meet National Needs""""""ROLE OF THE USGS""; ""SERVING CUSTOMERS""; ""FUTURE PROGRAM EMPHASIS""; ""Integrative System Models""; ""The USGS as a Scientific Information Portal""; ""Other Program Areas""; ""INTERNATIONAL ACTIVITIES""; ""FUTURE RESEARCH OPPORTUNITIES""; ""Hazards""; ""Hydrologic Processes and Hazards""; ""Wildfires and Public Policy""; ""Environment""; ""Global Climate Change""; ""Climate Variability and Water Resources""; ""Links Between Geologic Processes and Human Health""; ""State of the Nation's Ecosystems""; ""Restoration of Aquatic Ecosystems""
""Investigations to Support Wise Urban Development in the West""""""
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""SUMMARY""""""6 Preparing for the Future: Conclusions and Recommendations""; ""A NATURAL SCIENCE AND INFORMATION AGENCY""; ""MAJOR RESPONSIBILITIES""; ""Monitoring, Reporting, and Forecasting""; ""Assessing Resources""; ""Providing Geospatial Information""; ""NATIONAL AND INTERNATIONAL ROLES""; ""IMPROVING EFFECTIVENESS""; ""Priority Setting""; ""Meeting Technical Needs""; ""Budget""; ""SUMMARY""; ""REFERENCES""; ""Appendixes""; ""Appendix A Biographical Sketches of Committee Members""; ""Appendix B Oral Presentations and Written Statements Submitted to the Committee""; ""ORAL PRESENTATIONS""
""WRITTEN STATEMENTS""

Sommario/riassunto

The U.S. Geological Survey (USGS) has adapted to the changing political, economic, and technical state of the nation and the world since it was established in the late nineteenth century. Over a period of more than 120 years, the USGS has evolved from a small group of scientists who collected data and provided guidance on how to parcel, manage, and use the public lands of the West to an agency comprised of thousands of scientists who conduct research and assessment activities on complex scientific issues at scales ranging from the local to the global. The USGS will no doubt continue to evolve and adapt to meet changing national needs. In fact, the recent integration of the National Biological Service and parts of the U.S. Bureau of Mines into the USGS presents an ideal opportunity to examine the agency's vision, mission, role, and scientific opportunities as the organization begins the early years of the twenty-first century. The USGS recognized the need to adapt to changing demands when it asked the National Research Council (NRC) to undertake this study. The NRC formed a multidisciplinary committee of 16 experts to address issues related to the future roles, challenges, and opportunities of the agency.