Formulating High Performance Waterborne Epoxy Coatings

Once occupying a lesser, yet significant, role in the plastics' industry, thermoset plastics technology has increasingly become important to designers and users who work in specialty applications. Everything from toys to medical devices, and from automotive to sports and recreation products, are being manufactured using thermoset plastics. An increased understanding of thermoset plastics technology and processes has broadened their use exponentially over the last few years. In fact, the importance and contributions of unsaturated polyesters, urethanes, and epoxy thermosets have driven unprecedented sales and production figures that approach the definition of commodity materials. As a survey of the technology, the handbook provides the reader with the practical implications of crosslinking, as well as establishing relationships between time, temperature, and mass, often ignored in the general overviews allotted to thermoset plastics in other handbooks. The Handbook of Thermoset Plastics offers the most complete collection of general and technical details available for this important subject.

This Book Covers Creating A Perfume, Flower Perfumes & Formulation, Fantasy Perfumes & Their Formulation, Colognes For Men, Olfaction & Gustation, Raw Materials Of Perfumes, Classification Of Odours & Odourants, Packaging Of Perfumes, Testing Of Perfumes, Aerosol Spray, Aromatic Perfumery Compounds, Scent & Perfume, Spray Perfume, Perfumes For Soap, Detergent & Agarbatti Etc. Suppliers Of Raw Materials.

Epoxy Resin TechnologyWiley-InterscienceThermosetsStructure, Properties, and ApplicationsWoodhead Publishing

Waterborne Coatings and Additives

High-Performance Organic Coatings

Proceedings of the Fortieth Annual International Waterborne, High-Solids, and Powder Coatings Symposium

Proceedings of the ... Water-borne, Higher-solids, and Powder Coatings Symposium

Organic Coatings

Technology and Economics

The Book Covers Drugs And Cosmetics Acts And Rules, Most Commonly Used Cosmetics Raw Materials, Hair Structure And Its Chemistry, Hair Shampoos, Hair Tonics And Conditioners, Hair Wave Sets, Lacquers And Rinses, Hair Grooming Preparations, Permanent Hair Waving Preparations And Hair Straighteners, Hair Bleachers And Hair Colourants, Depilatories, Shaving Soaps & Creams, Skin Creams & Lotions, Suntan & Anti Sunburn Preparations, Skin Bleach Creams, Astringents & Skin Tonics, Antiperspirants & Deodorants, Face Powders & Other Coloured Make-Up Preparations, Body Powders (Talcum Powders), Face Packs And Masks, Nail Lacquers And Removers, Toothpastes, Tooth Powders, Mouthwashes, Hair Oils & Hair Lotions, Preservation Of Cosmetics, Plant & Equipment For Herbal Cosmetics Manufacture, Packaging Of Herbal Cosmetics, Miscellaneous Formulae, Indigenous Materials & Technologies For Herbal Cosmetics, Present Manufacturers, Suppliers Of Plant & Equipments, Cosmetics Consultants, Raw Materials & Chemicals Manufacturers/Suppliers, Manufacturers/Raw Materials Suppliers Of Herbs/Plants And Their Extracts Etc.

The definitive guide to organic coatings, thoroughly revised and updated—now with coverage of a range of topics not covered in previous editions Organic Coatings: Science and Technology, Fourth Edition offers unparalleled coverageof organic coatings technology and its many applications. Written by three leading industry experts (including a new, internationally-recognized coatings scientist) it presents a systematic survey of the field, revises and updates the material from the previous edition, and features new or additional treatment of such topics as superhydrophobic, ice-phobic, antimicrobial, and self-healing coatings; sustainability, artist paints, and exterior architectural primers. making it even more relevant and useful for scientists and engineers in the field, as well as for students in coatings courses. The book incorporates up-to-date coverage of recent developments in the field with detailed discussions of the principles underlying the technology and their applications in the development, production, and uses of organic coatings. All chapters in this new edition have been updated to assure consistency and to enable extensive cross-referencing. The material presented is also applicable to the related areas of printing inks and adhesives, as well as areas within the plastics industry. This new edition Completely revises outdated chapters to ensure consistency and to enable extensive cross-referencing Correlates the empirical technology of coatings with the underlying science throughout Provides expert troubleshooting guidance for coatings scientists and technologists Features hundreds of illustrative figures and extensive references to the literature A new, internationally-recognized coatings scientist brings fresh perspective to the content. Providing a broad overview for beginners in the field of organic coatings and a handy reference for seasoned professionals, Organic Coatings: Science and Technology, Fourth Edition, gives you the information and answers you need, when you need them.

The book covers Ammonia, Aluminium, Chlorine and Sodium Hydroxide, Cosmetics and Perfumes, Dyes, Enamels, Explosives, Glass and Alkali Silicates, Gyps um, Glass Fibres, Optical Fibres and Mineral Fibres, Industrial Chemicals from Benzene, Industrial Chemicals from Toluene, Industrial Chemicals from Xylenes, Industrial Chemicals from Methene, Industrial Gases, Lime, Mineral Fertilizers, Preparation of Methanol, Magnesium, Nickel, Organic Dyes, Oils, Fats and Waxes, Petable Water, Pigments, Pesticides, Rubber, Sodium Carbonate and Sodium Bicarbonate, Silicones , Uranium, Zeolites, Zinc, Aluminium Ingots from Aluminium Scrap, Cosmetics Industry (Modern), Fibre Glass Sheets, Herbal Cosmetics, Hydrated Lime, Latex Rubber Condomes, Magnesium Carbonate, Magnesium Metal and Calcium, Mineral Water and Soda Water, N.P.K. Fertilizer, Nickel Sulphate, Oxgen Gas Plaster of Paris, Refined Oils, Cotton Seed Oil, Groundnut Oil, Sunflower and Safflower Oil, Sodium Bicarbonate (Baking Soda) from Soda Ash, Single Super Phosphate, Toluene and SBP From Crude Naphtha, Zeolite-A Manufacturing (Detergent Grade), Zinc Oxide, Zinc Metal From Zinc Ash. visit www.eiriindia.org www.eiri.in

ASTM B 117 Screening of Nonchromate Conversion Coatings on Aluminum Alloys 2024, 2219, 5083, and 7075 Using DOD Paint Systems

Waterborne: Environmentally Friendly Coating Technologies

The Cost of Corrosion in China

Manufacture of Snacks Food, Namkeen, Pappad & Potato Products

Planning and Designing Research Animal Facilities

Paint Varnish Solvents & Coating Technology

Research institutions have or are planning to build, expand and renovate animal research facilities to keep up with the demands of biomedical research caused in part by growth in the use of genetically altered rodents and the upsurge of research in infectious diseases. Properly designed facilities greatly facilitate effective management and high-quality day-to-day animal care that is required to optimally support animal research and testing. There are multiple solutions to address the myriad of factors that influence the design and construction of animal research facilities. There is no “best design applicable for all facilities and arguably not even a single “best design for a given facility. For this reason, Planning and Designing Research Animal Facilities is not intended to be a “how to book. The goal is to cover the basic programmatic requirements of animal research facilities, provide ideas for meeting those requirements while, hopefully, stimulating the creative process in which designers in consultation with those who work in animal research facilities generate even better ideas. That is how progress has been made and will continue to be made. Facilitates communication between the parties involved in planning and designing animal facilities by providing contemporary information, and stimulating creativity that will help lead to wise decisions and advance the knowledge base for planning, design and constructing animal research facilities

A step-by-step introduction to coatings formulation: Insights into the chemical composition and binders of various types of paints; Exclusive selection, analysis, and annotation of existing recipes; Various examples of how to develop a real-life paint formulation

Polymer and colloidal chemistry, fabrication and testing of waterborne coatings PURs, polyisocyanates, acrylics, vinyls and more Sustainable surfactants, water soluble catalysts, high-throughput rheology, pigments This series volume contains 34 original papers on the chemistry and formulation of waterborne coatings. Chapters cover UV curing, testing and applications in many areas of latex paints, grouting and varnishes. The book discusses advances in curing, adhesion, superhydrophobic coatings and additives, with special attention to sustainable materials and methods.

Structure, Properties, and Applications

An Industrial Guide

Reviews in Environmental Health (1998)

Supplements

Journal of Protective Coatings & Linings

In the only book to focus on new developments and innovations in this hot field international experts from industry and academia present everything scientists need to know. The first section provides general concepts of the synthesis and properties of epoxy polymers and serves as a basis for the subsequent chapters. The second section includes new types of epoxy polymers recently commercialized or not yet present on the market, while the third section includes chapters related to the capacity of generating controlled nanostructures in epoxy-based materials. A fourth section is devoted to innovations in epoxy-based materials such as adhesives, coatings, pre-pregs, structural foams, injection-molded products and self-healing epoxies. Concluding remarks and perspectives are discussed in a short final section. The result is a one-stop reference source, collecting scientific and technological breakthroughs otherwise spread over hundreds of publications, patents and reports.

Third Edition brings acclaimed textthoroughly up to date with the latestorganic coatings technology Organic Coatings, Third Edition is an unparalleled reference and text for organic coatings technology and its myriad applications. It begins with discussions of key principles of coatings, then thoroughly explores raw materials, physical concepts, formulations, and applications. Scientists, engineers, and paint formulators all gain a deeper understanding of the principles underlying the technology and learn how to use these principles in the development, production, and application of organic coatings. The four authors, all leading industry experts, offer a unique approach to the topic that correlates the empirical technology of coatings with the underlying science. This Third Edition has been completely revised and updated to reflect numerous changes in the field, including changes driven by increasing pressure to lower VOC emissions, reduce energy requirements, and eliminate potential health hazards from organic coatings components. In addition, the authors have developed new material to make the text more accessible for scientists and engineers first entering the field, as well as for students taking coatings courses. At the same time, the hallmarks that distinguished the two previous editions have been retained, including: Troubleshooting guidance for coatings scientists and technologists Clear differentiation between established principles and hypotheses requiring further research Precise definitions of coatings industry terminology Extensive references to the current literature Hundreds of figures that help readers visualize key concepts and techniques Whether you are just entering the field of organic coatings and need a broad overview or you are an experienced professional who needs a sophisticated reference, you can depend on Organic Coatings to give you the information and answers you need.

Expand your knowledge and get fully acquainted with the various aspects of water-borne coatings - from production to properties to special features of their use! With the slow change from solvent-borne resins and coatings to water-borne coatings "Resins for waterborne coatings" is a must-read for any formulator wanting to expand their knowledge. The authors discuss important aspects of the "solvent-to-water-transition" of the past 40 to 50 years, take a deep dive into the key aspects and theories behind the production, properties and applications of these resins as well as providing an overview of how they are currently used in water-borne coatings. Suitable for: Newcomers, career-changers, students and professionals wanting to broaden and deepen their knowledge and seeking crucial background information to assist them with the selection and use of resins in water-borne coatings.

Chemical Abstracts

Epoxy Polymers

Toxicological Defense Mechanics

Thermosets

Toxicological Defense Mechanisms

Sweet's Industrial Construction and Renovation File

The paint and surface coatings industry is under sustained pressure to reduce or eliminate volatile organic compounds (VOCs), along with the coalescing solvents and glycol-based freeze-thaw stabilisers commonly used in emulsion paints. This pressure has resulted in a shift from solvent- to water-based coatings that possess high performance film-forming qualities without environmental risk. Waterborne Coatings and Additives outlines the most recent developments in the use of film-forming resins such as alkyds, epoxies, polyesters and polyurethanes, and their application in metal, concrete and textile treatment. It also looks in detail at the role of biocides and foam control agents, acetylenic and polymeric surfactants, clay rheology modifiers, driers and metallic pigments in the manufacture and formulation of aqueous systems. It shows how anti-pollution legislation has influenced recent practice. Waterborne Coatings and Additives contains work and ideas not published until now, and provides a thorough and detailed appraisal of a very broad subject. As such it is a valuable addition to existing literature on water-based coatings and the many additives associated with them, and will be required reading for anyone with interests in polymers and coatings, and - given its coverage of new and established technologies - both new and experienced workers in industry.

Epoxy is a term used to denote both the basic components and the cured end products of epoxy resins, as well as a colloquial name for the epoxide functional group. Epoxy resin are a class of thermoset materials used extensively in structural and specialty composite applications because they offer a unique combination of properties that are unattainable with other thermoset resins. Epoxies are monomers or prepolymers that further reacts with curing agents to yield high performance thermosetting plastics. They have gained wide acceptance in protecting coatings, electrical and structural applications because of their exceptional combination of properties such as toughness, adhesion, chemical resistance and superior electrical properties. Epoxy resins are characterized by the presence of a three membered cycle ether group commonly referred to as an epoxy group 1,2-epoxide, or oxirane. The most widely used epoxy resins are diglycidyl ethers of bisphenol-A derived from bisphenol-A and epichlorohydrin. The market of epoxy resins are growing day by day. Today the total business of this product is more than 100 crores. Epoxy resins are used for about 75% of wind blades currently produced worldwide, while polyester resins account for the remaining 25%. A standard 1.5-MW (megawatt) wind turbine has approximately 10 tonnes of epoxy in its blades. Traditionally, the markets for epoxy resins have been driven by demand generated primarily in areas of adhesives, building and civil construction, electrical insulation, printed circuit boards, and protective coatings for consumer durables, amongst others. The major contents of the book are synthesis and characteristics of epoxy resin, manufacture of epoxy resins, epoxide curing reactions, the dynamic mechanical properties of epoxy resins, physical and chemical properties of epoxy resins, epoxy resin adhesives, epoxy resin coatings, epoxy coating give into water, electrical and electronic applications, analysis of epoxides and epoxy resins and the toxicology of epoxy resins. It will be a standard reference book for professionals and entrepreneurs. Those who are interested in this field can find the complete information from manufacture to final uses of epoxy resin. This presentation will be very helpful to new entrepreneurs, technocrats, research scholars, libraries and existing units.

According to one study, there are more than 250 races of corn inabout 14 racial groups. Maize or Corn products have got tremendous demand in India and in overseas countries. Now-a-days many eatable products are being produced from maize. To consider the demand of these products EIRI have recently published a unique book on its subjects. The book 'Technology of Maize and Allied Corn Products' covers various methods including Corn, Types of Corn, Botany of Corn, Cultivation Practices, Carbohydrats and Related Compounds, Quality Factors, Traditional Food Products from Corn, Corn Milling, Products and their Uses, Processing Ready-to Breakfast Cereals, Popcorn, Formulated Puffed Snacks, Manufacturing Corn Chips, Maize Products, Maize Starch, Sweet Corn, Baby Corn, Extruding Snacks, Corn Flakes, Liquid Glucose, Maize/Corn Oil, Malto Dextrin from Maize, Plant Economics of Non-Roasted Corn Flakes (POHA), Starch from Maize, Snack Food, Yeat Dry Powder from Maize, Suppliers of Maize/Corn Processing Machineries, Present Manufactuers/Exporter/Suppliers of Maize and Maize Products

Paint, Pigment, Solvent, Coating, Emulsion, Paint Additives And Formulations

Reviews in Environmental Health, 1998

Technology Of Maize And Allied Corn Products

products for industrial construction and renovation

Waterborne Coatings

Environmental Health Perspectives

This collection of 463 water-based trade and industrial formulations will be of value to technical and managerial personnel in paint manufacturing companies and firms which supply raw materials or services to these companies, and to those interested in less hazardous, environmentally safer formulations. The data consists of selections of manufacturers' suggested formulations made at no cost to, or influence from, the makers and distributors of these materials. Only the most recent data is included. Any solvent containment is minimal.

Introduction, General Pigments Physical Properties, Pigments Processing, Plasticizers And Solvents, Synthetic Resins, Cellulose Ester And Ether Produc Ts, Varnishes, Pigmentation, Paints (Decorative & Building), Coatings, Industrial Paints & Coatings, Industrial Finishes, Miscellaneous Coatings And Ancillary Materials, Testing And Evaluation, Miscellaneous Formulae, Project Profiles Of Aluminium Paints, Cement Paints, Acrylic Emulsion Paints, Insulating Varnish, Powder Coating & Many Others. Suppliers Of Raw Materials, Suppliers Of Plant And Machinery, Present Manufacturers, Packaging Material Addresses And Many Other Details.

Paint coatings remain the most widely used way of protecting steel structures from corrosion. This important book reviews the range of organic paint coatings and how their performance can be enhanced to provide effective and lasting protection. The book begins by reviewing key factors

affecting the success of a coating, including surface preparation, methods of application, selecting an appropriate paint and testing its effectiveness. It also discusses why coatings fail, including how they degrade, and what can be done to prevent these problems. Part two describes the main types of coating and how their performance can be enhanced, including epoxies, polyester, glass flake, fluoropolymer, polysiloxane and waterborne coatings. The final part of the book looks at applications of high-performance organic coatings in such areas as reinforced concrete, pipelines, marine and automotive engineering. With its distinguished editor and international team of contributors, High-performance organic coatings is a valuable reference for all those concerned with preventing corrosion in steel and other metal structures. Reviews the factors affecting the success of a coating Describes the main types of coating and how their performance can be enhanced, including epoxies, polyester and waterborne coatings Examines applications in such areas as reinforced concrete pipelines and marine engineering

Sweet's Engineering & Retrofit, Mechanical, Electrical, Civil/structural Catalog File

Epoxy Resins Technology Handbook (Manufacturing Process, Synthesis, Epoxy Resin Adhesives and Epoxy Coatings) 2nd Revised Edition.

Epoxy Resin Technology

Pharmaceuticals and Drugs Technology with Formulations

Profitable Small Scale Manufacture of Cosmetics (Synthetic & Herbal)

Science and Technology

This book comprehensively covers corrosion and corrosion protection in China in the areas including infrastructure, transportation, energy, water environment, as well as manufacturing and public utilities. Furthermore, it presents a major consulting project of Chinese Academy of Engineering, which was the largest corrosion investigation project in Chinese history, including the corresponding methods, processes and corrosion protection strategies, and provides valuable information for numerous industries. Sharing essential insights into corrosion prediction and decision-making, this book will help to decrease costs and extend the service life of equipment and facilities; accordingly, it will benefit scientists and engineers working on corrosion research and protection, as well as economists and government employees.

The "man who invented the future," Verne created the prototype for modern science fiction. His prophetic 1870 adventure novel, featuring a bizarre underwater craft commanded by the mysterious Captain Nemo, predated the submarine. The crowning achievement of Verne's literary career, the book influenced H. G. Wells and later generations of writers.

Extruded Snacks, Health Food Snacks, Snack Food Preservatio & Packaging, Details Of Plant, Machinery & Equipments, Instant Noodles, Namkeen, Namkeen & Sweets, Potato Products. Manufacturers Of Plants & Machineries Of Snacks Food, Manufacturers Of Machineries Of Papped Plants, Manufacturers Of Plant & Machineries Of Namkeen, Manufacturers Of Raw Materials, Suppliers Of Packaging Materials. Potato, Pappad & Barian Plant, Potato Waffers, Potato Chips, Packaging Of Snack Foods.

An International Textbook

Coatings Formulation

Modern Technology of Organic and Inorganic Chemicals

Water-Based Paint Formulations

Resins for Water-borne Coatings

Sweet's Catalog File

Tablet And Capsules, Oral Preparations, External Preparations, Preparations For The Eye, Antibiotics, Formulations, Packaging, Tablets, Injectables, L Iquid Orals, Capsules And Dry Syrups, Eye And Ear Preparations, Topical Preparations, Project Profiles On Many Pharmaceutical And Drugs Have Also Been Provided, Suppliers Of Plant And Machinery And Raw Materials Are Also Covered.

The second edition of this popular industrial guide describes over 2,800 currently available epoxy resins, curing agents, compounds, and modifiers, based on information supplied by 71 manufacturers or distributors of these products. Epoxy resins have experienced tremendous growth since their introduction in the 1950s. Future growth will be in new markets in the specialty performance areas and high-technology applications. Each raw material or product is described, as available, with typical assay or checkpoint figures and a brief summary of important features or applications. Additional sections useful to the reader are the Suppliers' Addresses and a Trade Name Index.

In this new edition, Thermosets: Structure, Properties, and Applications builds on and updates the existing review of mechanical and thermal properties, as well as rheology and curing processes of thermosets, and the role of nanostructures in thermoset toughening. All chapters have been updated or re-written, and new chapters have been added to reflect ongoing changes and developments in the field of thermosetting materials and the applications of these materials. Applications of thermosets are the focus of the second part of the book, including the use of thermosets in the building and construction industry, aerospace technology and as insulation materials. Thermoset adhesives and coatings, including epoxy resins, acrylates and polyurethanes are also discussed, followed by a review of thermosets for electrical applications. New chapters include coverage of thermoset nanocomposites, recycling issues, and applications such as consumer goods, transportation, energy and defence. With its distinguished editor and international team of expert contributors, the second edition of Thermosets: Structure, Properties, and Applications is an essential guide for engineers, chemists, physicists and polymer scientists involved in the development, production and application of thermosets, as well as providing a useful review for academic researchers in the field. Links structure, properties, and applications, making this book relevant to both academia and engineers in industry Includes entirely new chapters on the use of thermosets in aerospace, transport, defense, and a range of consumer applications Enables practitioners to stay current on the latest developments in recycling of thermosets and their composites

Handbook of Thermoset Plastics, 2nd Ed.

Technology for Waterborne Coatings

Solvent-Free Adhesives

Epoxy Resins, Curing Agents, Compounds, and Modifiers, Second Edition

Plastic Compounding, Masterbatches, Pet And Other Plastic Processing Industries

Revolutionary Materials

The Book Covers Latest Technology Including Polyethylene, Extrusion, Injection Moulding, Blowmoulding, Polyester Terephthalate (Pet), Rotational Mould Ing, Post Extrusion Process, Vacuum Metallizing, Thermosetting Plastics, Recycling, Additives For Polymers, Pvc Compounding, Colour Master Batch For Various Plastics, Compact Disks, Plastic Films And Sheets, Pet Bottles From Pre-Form, Pet Pre-Form From Pet Resin, Pvc Pipes And Fittings, Pvc Extrusion Profiles, Computer Ribbon Cartridges, Hdpe/Pp Woven Sacks (Bags), Thermocole Based Disposable Glass, Cups And Plates, Suppliers Of Plant, Equipments & Machineries, Suppliers Of Raw Materials Etc.

Paint, Pigment, Solvent, Coating Paint, Additives and Formulations Hank Book is published by EIRI Consultants & Engineers. As these all paint and alli ed products have got good demand in India and also having export, potential. The invaluable book is covering depth manufacturing technology with various formulae on different paint items. The book covers various methods including Flavours and Its Study, Changes of Food Flavours Due to processing, Flavouring Materials Made by Processing, Natural Flavouring Materials, Flavouring Materials of Natural Origin, Manufacturing Technology of Flavours, Food Colourants. The book has been written for the benefit and to prove an asset and a handy reference guide in the hands of new entrepreneurs and well established industrialists. The book 'Paint, Pigment, Solvent, Coating, Emulsion, Paint Additives and Formulations' covers various methods including Paint Additives, Solvents, Pigments, How to Formulate a Paint, Inhibitive Primers for Metal, Paints for Ships, Drying and Curing Additives, Light Stabilizers, Foam Control Additives, Additives for Powder Coatings, Calcium Aluminium Silicate and Magnesium Aluminium Silicate, Paint Stainers, Painting of Aircraft, Anionic Bitumen Emulsions, Rheology Modifiers in Waterborne Paints, High Performance Coatings, Bio-Diesel-Opportunities for the Coating Industry, Road Marking Paints, Emulsions, Silica Gels, Emulsion Paints, Paints and Varnish Removers, Spray Painting, Paint Bases, Paint, Varnish and Enamel Removers, Paint Mixing and Grinding, Pigments Formulae. The book has been written for the benefit and to prove an asset and a handy reference guide in the hands of new entrepreneurs and well established industrialists.

This book presents both background material and state-of-the-art research on waterborne coatings. It analyzes the most likely developments in resins chemistry, and examines application properties and in situ methods of cross-linking applied films. It also discusses the primary parameters in drying and spray applications.

Epoxy Resins

Hand Book Of Perfumes With Formulations

New Materials and Innovations

Interest in solvent-free adhesives is increasing because of environmental concerns about the use of solvent containing adhesives and the subsequent need to decrease or eliminate solvent use. In this report adhesives are classified by the type of chemistry of the adhesive rather than the mode of application or the end-use. An additional indexed section containing several hundred abstracts from the Rapra Polymer Library database provides useful references for further reading.

This study examines the corrosion resistance of eight nonchromate conversion coatings versus hexavalent chromium-based Alodine 1200S controls on scribed coated test panels of aluminum alloys 2024, 2219, 5083, and 7075. Five representative Department of Defense (DoD) primer/topcoat organic coating systems were evaluated for each of the conversion coating/alloy combinations. The five DoD coating systems were as follows: MIL-PRF-23377 high solid epoxy primer with MIL-PRF-85285 high solid polyurethane topcoat; MIL-PRF-85582cl waterborne epoxy primer with MIL-PRF-85285 topcoat; MIL-PRF-85582nc waterborne epoxy chromium-free formulation primer with MIL-PRF-85285 topcoat; MIL-P-53030 water-reducible epoxy primer with MIL-C-53039 chemical agent resistant, single-component polyurethane topcoat; and MIL-P-53O22 epoxy primer with MIL-C-53039 polyurethane topcoat. Scribed panels were exposed using American Society for Testing and Materials (ASTM) B 117 (neutral salt fog) for 3000 hours and were photographed and measured at 1, 2, and 3 weeks. Subsequent measurements were taken every 500 hours until 3000 hours were reached or until failures from scribe creepback and/or via blistering occurred using method ASTM D 1654. The testing resulted in the following conclusions: pretreatment performance varies among varying alloys; DoD coating systems formulated with chromium +6 (Cr+6) additives provided significantly enhanced corrosion resistance versus coatings without Cr+6; Alodine 5200 and NAVAIR TCP Cr+3 performed best overall in ASTM B 117 salt fog among non-Cr+6-based pretreatments with performance at or near Cr+6-based Alodine 1200S across all alloys and coating systems examined; commercially available Alodine 5200, in conjunction with the chromium-free organic coatings tested in this study, provides a completely chromium-free coating system with good corrosion resistance. (29 tables, 13 figures, 17 refs.).

Thanks to their excellent characteristics, epoxy resins belong to the most established binders within the coatings industry. This new book explains the basic principles of the chemistry of the epoxy group and imparts the use of epoxy and phenoxy resins in industrial coatings, such as anticorrosive coatings, floor coatings, powder coatings and can coatings, with the help of concrete formulations