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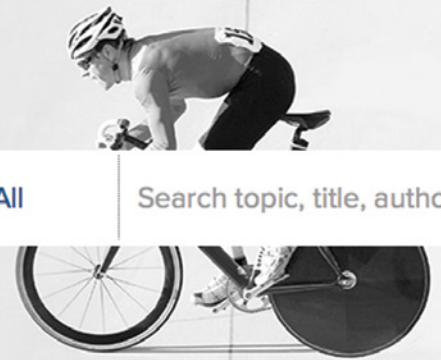


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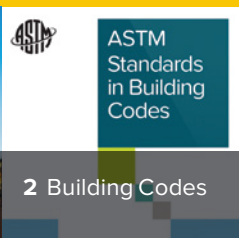
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TRAINING

Highlights in this issue:



24 Book of Standards



2 Building Codes



9 Online Training

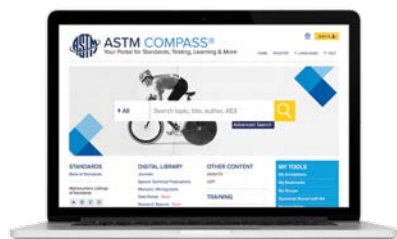


6 MNL 43 - 3rd



13 Proficiency Testing

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Asbestos Control: Surveys, Assessment, Abatement, and Maintenance, 3rd Edition, p. 3

ASTM Standards for Sustainability in Buildings, p. 3

ASTM Standards on Renewable Energy, p. 4

Technical Aspects of Phase I/II Environmental Site Assessment, p. 6

Pesticide Formulation and Delivery Systems, 34th Volume, Translating Basic Science into Products, p. 6

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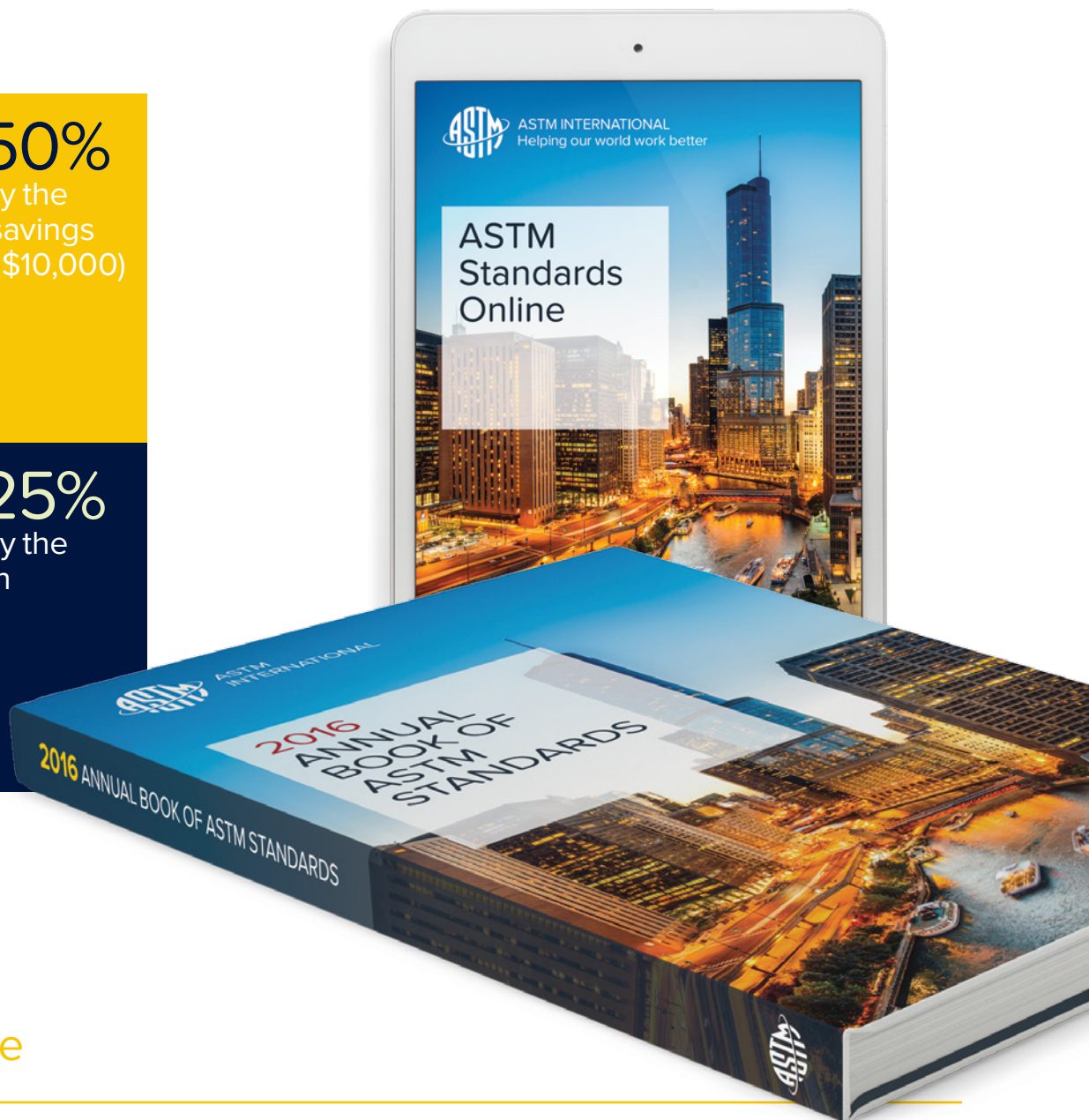
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Building and Construction

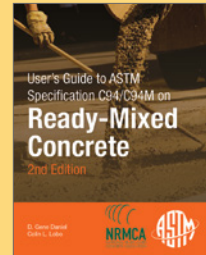
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Manual 49

User's Guide to ASTM Specification C94/C94M on Ready-Mixed Concrete

Editors: D.G. Daniel, C.L. Lobo

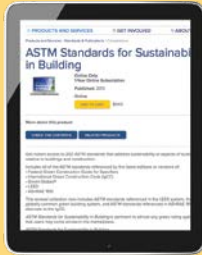
Co-published by ASTM and NRMCA, this new edition represents a significant re-write of ALL portions of the book and explains how to apply C94 in a very straight forward manner. Twenty-two comprehensive chapters explain every aspect of ASTM C94, the "reference standard" for the industry.

ASTM C94 covers the complex subject of ordering, production and delivery of ready-mixed concrete. There have been many changes and improvements to C94 and many changes in the standards that are referenced in C94.

146 Pages (2014); Hard Cover 8.5" x 11
Price \$89

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ASTM Standards for Sustainability in Building

Includes the new version of ASTM E1527-13 Practice for Environmental Site Assessments: Phase I ESA Process

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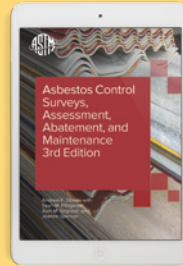
- Federal Green Construction Guide for Specifiers
- International Green Construction Code (IgCC)
- Green Globes®
- LEED
- ASHRAE 189.1

This revised collection includes ASTM standards referenced in the LEED system, the most globally common green building system, and standards referenced in ASHRAE 189.1, the alternate to the IgCC. It is pertinent to almost any green rating system or code that users may come across in the marketplace.

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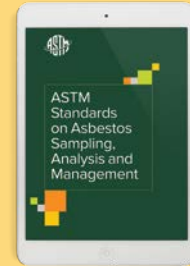
Manual 23, 3rd Edition Asbestos Control: Surveys, Assessment, Abatement and Maintenance 3rd Edition

Learn about the most successful methods of preventing harmful disturbance and exposure to asbestos. Building surveys, assessment of asbestos-containing materials, abatement projects and operations and maintenance programs are discussed with the context of these ASTM standards:

- D7521 Standard Test Method for Determination of Asbestos in Soil
- D7886 Standard Practice for Asbestos Exposure Assessments for Repetitive Maintenance and Installation Tasks
- E1368 Standard Practice for Visual Inspection of Asbestos Abatement Projects
- E2356 Standard Practice for Comprehensive Building Asbestos Surveys
- E2394 Standard Practice for Maintenance, Renovation and Repair of Installed Asbestos Cement Products
- E1494 Standard Practice for Encapsulation Testing of Friable Asbestos-Containing Surfacing Materials

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Asbestos Compilation ASTM Standards on Asbestos Sampling, Analysis and Management

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ASTM Standards Covered in this Compilation:

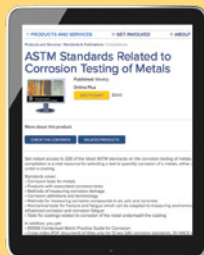
- D5755
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- Tests for coatings related to corrosion of the metal underneath the coating

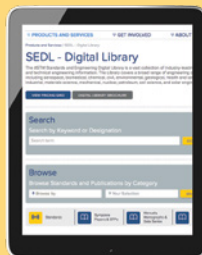
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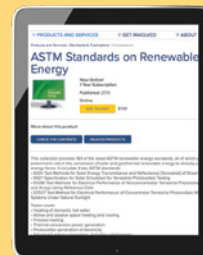
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- E424 Test Methods for Solar Energy Transmittance and Reflectance (Terrestrial) of Sheet Materials
- E927 Specification for Solar Simulation for Terrestrial Photovoltaic Testing
- E1036 Test Methods for Electrical Performance of Nonconcentrator Terrestrial Photovoltaic Modules and Arrays Using Reference Cells
- E2527 Test Method for Electrical Performance of Concentrator Terrestrial Photovoltaic Modules and Systems Under Natural Sunlight

Topics cover:

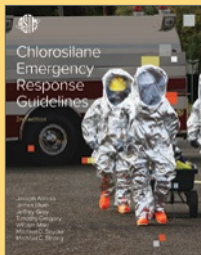
- Heating of domestic hot water
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Environment

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Manual 33-2nd

Chlorosilane Emergency Response Guidelines 2nd Edition

The Operations Safety Committee of the Silicones Environmental, Health and Safety Council (SEHSC) has compiled this manual to provide guidance on how to safely handle chlorosilanes when responding to fires, leaks and/or spills involving chlorosilanes. You'll access techniques that have been used by trained and knowledgeable emergency response teams.

The chlorosilanes are divided into four distinct classes:

- SEHSC-001 (ERG Guide 139): Any chlorosilane containing an SiH bond.
- SEHSC-002 (ERG Guide 155): Flammable chlorosilanes not containing SiH bonds.
- SEHSC-003 (ERG Guide 156): Combustible chlorosilanes not containing SiH bonds.
- SEHSC-004 (ERG Guide 157): Silicon tetrachloride.

45 pages (2015); Soft Cover 8.5" x 11"

Price \$77

ISBN 978-0-8031-7048-3

Stock # MNL33-2nd

eBook ISBN 978-0-8031-7049-0

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ASTM Standards Related to ISO 14001 and the Environmental Management System

Ten key ASTM standards address the needs of anyone following or using ISO 14001—Environmental Management Systems (EMS)—Requirements with Guidance for Use. These **10** specific standards help the user follow the “Plan-Do-Check-Act” framework recognized in ISO 14001, as well as other risk management standards, such as ANSI Z10. An EMS provides a structured framework to build mission capability by:

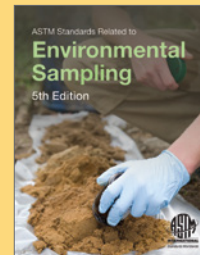
- Integrating environmental considerations into day-to-day operations
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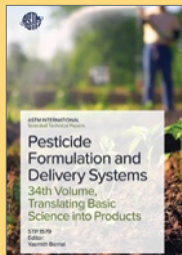
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STP1579

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Editor: Yasmyth Bernal

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This compilation includes 10 peer-reviewed papers that were presented at a symposium held October 22-24, 2013 in Jacksonville, FL.

180 pages (2015); Price \$60
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 ISSN 1040-1695

New Edition



Manual 43, 3rd edition

Technical Aspects of Phase I/II Environmental Site Assessments 3rd Edition

Authors: Zdenek Hejzlar, Julie Kilgore, Norman S. Eke

Explore standards E1527 and E1903, including the 2013 changes to standard E1527 explanation of the relationship between the U.S. EPA's All Appropriate Inquiries regulation (AAI) and ASTM E1527.

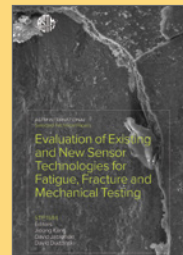
An excellent resource for buyers, engineers, consultants, regulators, owners, attorneys, lenders, brownfield grantees, real estate brokers, appraisers, and economic development agencies.

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STP1584

The Evaluation of Existing & New Sensor Technologies for Fatigue, Fracture and Mechanical Testing: 4th Volume

Editors: Jidong Kang, David Jablonski, David Dudzinski

Get 11 rigorously peer-reviewed papers containing expert knowledge on sensor technologies for fatigue, fracture and mechanical testing with this compilation. These papers were presented at a symposium held May 7-8, 2014 in Toronto, Ontario, Canada. The symposium was sponsored by ASTM International Committee E08 on Fatigue and Fracture and Subcommittee E08.03 on Advanced Apparatus and Techniques.

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- Designing and installing groundwater monitoring wells
- Sampling and monitoring groundwater
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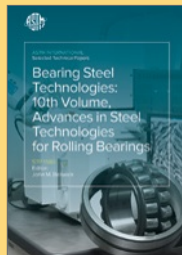
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- New Bearing Steels for Improved Functional Properties

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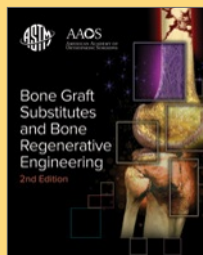
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Metals

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Editors: Cato T. Laurencin, Tao Jiang

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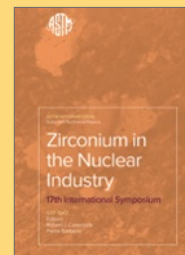
- F2919/F2919M Welded Wire Mesh Fence Fabric (Metallic-Coated or Polymer Coated) with Variable Mesh Patterns or Meshes Greater than 6 in.2 [3871 mm²] in Panels
- F2957 Ornamental Aluminum Fence Systems
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STP1543 Zirconium in the Nuclear Industry: 17th Volume

Editors: Robert J. Comstock, Pierre Barberis

This STP contains the 38 peer-reviewed papers – two papers were named Kroll winners – that were presented at the 17th International Symposium on Zirconium in the Nuclear Industry held in Hyderabad, Andhra Pradesh, India in 2013.

A dominant theme in these papers is the role of hydrogen on the performance of zirconium alloy components.

In addition to papers that highlight the impact of hydrogen, several papers focus on understanding the mechanisms of hydrogen ingress into the metal or understanding the interaction of hydrogen with point defects and dislocation loops in the matrix.

1194 Pages (2014); Soft Cover 6x9
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eBook ISBN # 978-0-8031-7580-8
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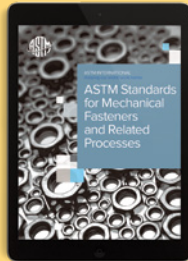
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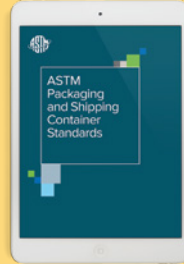
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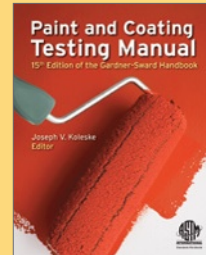
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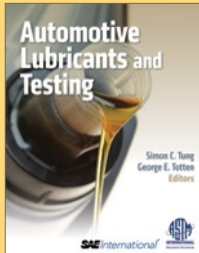
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Manual 62

ASTM Handbook of Automotive Lubricants and Testing

Editors: S.C. Tung, G.E. Totten

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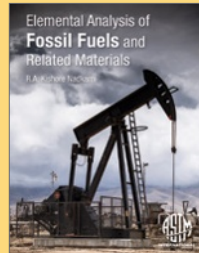
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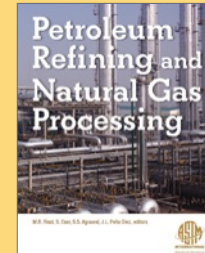
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Editors: M.R. Riazi, S. Eser, S.S. Agrawal, J.L. Peña-Díez

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Petroleum



Manual 72

The Practice of Flash Point Determination: A Laboratory Resource

Author: E.W. White; Editor: R.G. Montemayor

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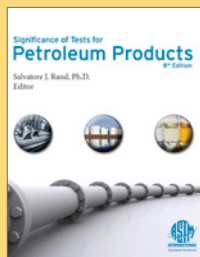
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- D92 Flash and Fire Points by Cleveland Open Cup Tester
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Manual 1

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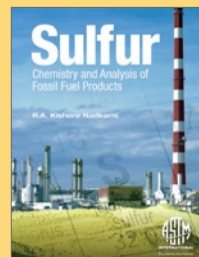
Editor: S.J. Rand

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Monograph 11

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Author: R.A. Kishore Nadkarni

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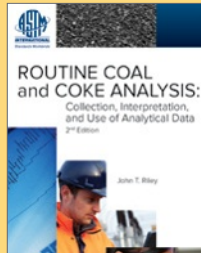
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Manual 57

Routine Coal and Coke Analysis: Collection, Interpretation, and Use of Analytical Data: 2nd Edition

Author: John T Riley

This new edition provides guidance for the use of ASTM coal standards including setting up the laboratory for the tests and training staff in fuel testing laboratories. With the latest information on routine coal and coke analysis, discussions of new standards, presentation of revised standards, this manual is the most comprehensive resource available.

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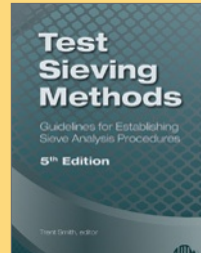
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Manual 32

Manual on Test Sieving Methods: Guidelines for Establishing Sieve Analysis Procedures

Author: Trent Smith

Seven comprehensive chapters provide the latest guidelines for establishing sieve analysis procedures. It is intended for use as a supplement to many ASTM standards relating to the sieve analysis of materials, including E11-13 Specification for Woven Wire Test Sieve Cloth and Test Sieves.

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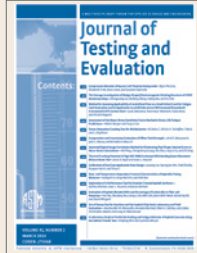
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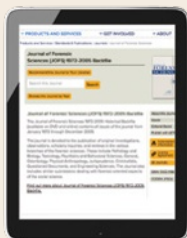
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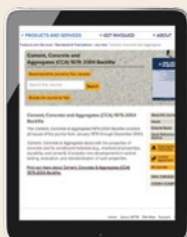


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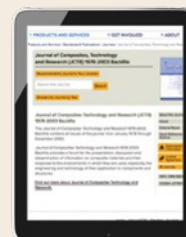


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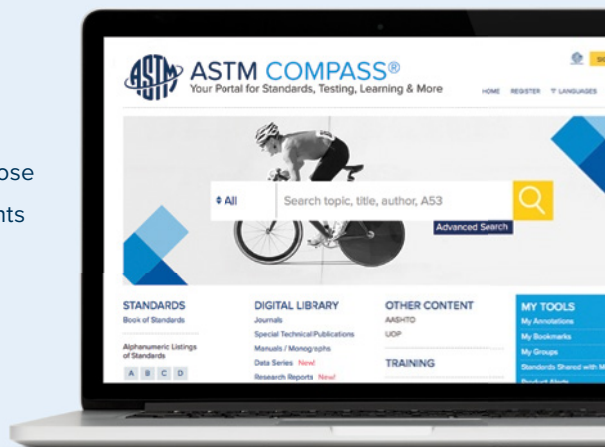
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04.10	Wood	\$285	\$570	\$342	\$684	89	\$249	July
04.11	Building Constructions (I): E72–E2110	\$529	\$1,058	\$635	\$1,270	160	\$461	Nov
04.12	Building Constructions (II): E2112–Latest; Sustainability; Asset Management; Technology and Underground Utilities	\$335	\$669	\$401	\$803	176	\$293	Nov
04.13	Geosynthetics	\$224	\$448	\$269	\$538	149	\$196	May

Section 5: Petroleum Products, Lubricants, and Fossil Fuels

SAVE 25% 1,008 Standards; Online Basic \$1,853; Online+ \$2,224; Print \$1,642 (must be prepaid; price reflects discount)

05.01	Petroleum Products, Liquid Fuels, and Lubricants (I): C1234-D3710	\$501	\$1,002	\$601	\$1,202	240	\$438	Feb
05.02	Petroleum Products, Liquid Fuels, and Lubricants (II): D3711-D6122	\$446	\$892	\$535	\$1,070	209	\$390	Mar
05.03	Petroleum, Liquid Fuels, and Lubricants (III): D6138-D6971	\$463	\$926	\$556	\$1,111	123	\$404	Mar
05.04	Petroleum Products, Liquid Fuels, and Lubricants (IV): D6973-Latest	\$383	\$765	\$459	\$919	129	\$340	Mar
05.05	Petroleum Products, Liquid Fuels, and Lubricants (V): D7756-Latest; Combustion Characteristics; Manufactured Carbon and Graphite Products	\$344	\$689	\$413	\$827	123	\$312	Feb
05.06	Gaseous Fuels; Coal and Coke; Bioenergy and Industrial Chemicals from Biomass; Catalysts	\$345	\$690	\$414	\$828	184	\$306	Sept

Section 6: Paints, Related Coatings, and Aromatics

SAVE 25% 845 Standards; Online Basic \$1,008; Online+ \$1,210; Print \$880 (must be prepaid; price reflects discount)

06.01	Paint—Tests for Chemical, Physical, and Optical Properties; Appearance	\$401	\$802	\$481	\$962	264	\$350	Feb
06.02	Paint—Products and Applications; Protective Coatings; Pipeline Coatings	\$354	\$708	\$425	\$850	269	\$308	Feb
06.03	Paint—Pigments, Polymers, Resins, Naval Stores, Cellulosic Esters, and Ink Vehicles	\$322	\$644	\$386	\$773	143	\$281	Mar
06.04	Paint—Solvents; Aromatic Hydrocarbons	\$268	\$536	\$322	\$643	169	\$234	Mar

Section 7: Textiles

SAVE 25% 344 Standards; Online Basic \$523; Online+ \$628; Print CDs \$456 (must be prepaid; price reflects discount)

07.01	Textiles (I): D76-D4391	\$370	\$740	\$444	\$888	182	\$323	Nov
07.02	Textiles (II): D4393-Latest	\$326	\$652	\$391	\$782	162	\$285	Nov

Volume	ONLINE Basic (Active Standards Only) ONLINE+ (Actives PLUS Redlines, Historicals, and Withdrawns) * Single, registered user, ** Multiple users at the same site	Price: Online Basic*	Price: Online Basic LAN**	Price: Online Plus*	Price: Online PlusLAN**	# of Standards	Print	
							Price	Month Published

Section 8: Plastics

SAVE 25% 712 Standards; Online Basic \$1,082; Online+ \$1,298; Print \$944 (must be prepaid; price reflects discount)

08.01	Plastics (I): C1147–D3159	\$317	\$634	\$380	\$761	133	\$276	June
08.02	Plastics (II): D3222–D5083	\$331	\$662	\$397	\$794	130	\$289	June
08.03	Plastics (III): D5117–Latest Reinforced Plastic Piping Systems and Chemical Equipment; Plastic Building Products	\$414	\$828	\$497	\$994	217	\$360	July
08.04	Plastic Piping Systems	\$381	\$762	\$457	\$914	232	\$333	Jan

Section 9: Rubber

SAVE 25% 339 Standards; Online Basic \$463; Online+ \$556; Print \$404 (must be prepaid; price reflects discount)

09.01	Rubber, Natural and Synthetic—General Test Methods; Carbon Black	\$382	\$764	\$458	\$917	211	\$334	July
09.02	Rubber Products, Industrial—Specifications and Related Test Methods; Gaskets; Tires	\$234	\$468	\$281	\$562	128	\$205	Aug

Section 10: Electrical Insulation and Electronics

SAVE 25% 379 Standards; Online Basic \$792; Online+ \$950; Print \$691 (must be prepaid; price reflects discount)

10.01	Electrical Insulation (I): D69–D2484	\$247	\$494	\$296	\$593	55	\$214	May
10.02	Electrical Insulation (II): D2518–Latest	\$272	\$544	\$326	\$653	96	\$237	May
10.03	Electrical Insulating Liquids and Gases; Electrical Protective Equipment	\$224	\$448	\$269	\$538	95	\$196	May
10.04	Electronics; Declarable Substances in Materials; 3D Imaging Systems; Additive Manufacturing Technologies	\$314	\$628	\$377	\$754	133	\$274	April

Section 11: Water and Environmental Technology

SAVE 25% 1,013 Standards; Online Basic \$1,886; Online+ \$2,263; Print \$1,672 (must be prepaid; price reflects discount)

11.01	Water (I)	\$358	\$716	\$430	\$859	142	\$312	April
11.02	Water (II)	\$369	\$738	\$443	\$886	213	\$322	May
11.03	Occupational Health and Safety; Protective Clothing	\$217	\$434	\$260	\$521	94	\$190	Oct
11.04	Waste Management	\$230	\$460	\$276	\$552	110	\$202	Sept
11.05	Environmental Assessment, Risk Management and Corrective Action	\$284	\$568	\$341	\$681	213	\$249	Aug
11.06	Environmental Assessment, Risk Management and Corrective Action; Biological Effects and Environmental Fate	\$346	\$692	\$415	\$830	69	\$298	Aug
11.07	Air Quality	\$376	\$752	\$451	\$902	174	\$328	Oct
11.08	Pesticides, Antimicrobials, and Alternative Control Agents; Hazardous Substances and Oil Spill Response	\$376	\$753	\$452	\$903	163	\$330	Aug

Section 12: Nuclear, Solar, and Geothermal Energy

SAVE 25% 327 Standards; Online Basic \$561; Online+ \$673; Print \$490 (must be prepaid; price reflects discount)

12.01	Nuclear Energy (I)	\$373	\$746	\$448	\$895	170	\$325	Aug
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							Price	Month Published

Section 13: Medical Devices and Medical Services

SAVE 25% 405 Standards; Online Basic \$515; Online+ \$618; Print \$456 (must be prepaid; price reflects discount)

13.01	Medical and Surgical Materials and Devices (I): E667-F2477	\$314	\$628	\$377	\$754	225	\$274	Sept
13.02	Medical and Surgical Materials and Devices (II): F2502-Latest; Emergency Medical Services; Search and Rescue; Anesthetic and Respiratory Equipment	\$379	\$758	\$455	\$910	180	\$334	Sept

Section 14: General Methods and Instrumentation

SAVE 25% 472 Standards; Online Basic \$1,116; Online+ \$1,340; Print \$990 (must be prepaid; price reflects discount)

14.01	Healthcare Informatics	\$337	\$674	\$404	\$809	31	\$295	June
14.02	Particle and Spray Characterization; Forensic Sciences; Accreditation & Certification; Forensic Psychophysiology; Nanotechnology; Forensic Engineering	\$259	\$517	\$310	\$621	112	\$227	July
14.03	Temperature Measurement	\$262	\$524	\$314	\$629	44	\$228	July
14.04	Laboratory Apparatus; Degradation of Materials; SI; Oxygen Fire Safety	\$300	\$600	\$360	\$720	133	\$262	July
14.05	Statistical Methods; Hazard Potential of Chemicals; Thermal Measurements; Manufacture of Pharmaceutical Products	\$351	\$702	\$421	\$842	152	\$308	July

Section 15: General Products, Chemical Specialties, and End Use Products

SAVE 25% 2,015 Standards; Online Basic \$2,643; Online+ \$3,172; Print \$2,311 (must be prepaid; price reflects discount)

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15.03	Space Simulation; Aerospace and Aircraft; Composite Materials	\$370	\$740	\$444	\$888	189	\$323	Oct
15.04	Soaps and Other Detergents; Polishes; Leather; Resilient Floor Coverings	\$313	\$626	\$376	\$751	272	\$273	Sept
15.05	Engine Coolants and Related Fluids; Halogenated Organic Solvents and Fire Extinguishing Agents Industrial and Specialty Chemicals	\$268	\$536	\$322	\$643	178	\$234	Aug
15.06	Adhesives	\$248	\$496	\$298	\$595	126	\$215	Aug
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15.09	Paper and Paper Products; Business Imaging Products	\$300	\$600	\$360	\$720	60	\$262	June
15.10	Packaging; Flexible Barrier Packaging	\$357	\$714	\$428	\$857	220	\$310	June
15.11	Consumer Products; Light Sport Aircraft; Unmanned Aircraft Systems; Aircraft Systems; Unmanned Maritime Vehicle Systems (UMVS); Language Services and Products; General Aviation Aircraft	\$300	\$600	\$360	\$720	181	\$262	Nov
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Under the heading of steel plate, sheet, and strip, this volume covers specifications that stress mechanical property requirements and applications. The majority of them have been adopted by the Department of Defense. Also featured are specifications that detail the properties of assorted types of steel wire and industrial sizing screens.

Volume 01.04

Steel—Structural, Reinforcing, Pressure Vessel, Railway

868 Pages; 125 Standards; Available January

Print \$238

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This volume features specifications that fix the requirements for various types of structural steel, such as high-strength, low-alloy, rolled steel floor plates, and carbon-silicon steel plates. Some standards focus on plates and forgings used in boilers and pressure vessels, while others deal with steel for concrete reinforcement and prestressed concrete. Also included are specifications that set the properties for railway service rails and accessories.

Volume 01.05

Steel—Bars, Forgings, Bearing, Chain, Tool

870 Pages; 105 Standards; Available February

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ISBN 978-1-6220-4865-6; Stock # S010516

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Specifications and test methods cover the properties of various steel bars for specific or general applications. Standards focus on carbon and alloy steel axles, wrought carbon steel wheels, steel tires, and carbon and alloy steel forgings for railway use.

Volume 01.05 also provides standards for steel forgings and billets in assorted applications, such as pressure vessels, rotors, and general use. The remaining specifications cover steel chain, bearing steels, and tool steels.

Volume 01.06

Coated Steel Products

992 Pages; 139 Standards; Available February

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ISBN 978-1-6220-4866-3; Stock # S010616

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This volume covers aluminum or zinc-coated steel, tin mill products, and coated steel wire. It also includes standards for chain-link, ornamental, and security fences.

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This volume covers requirements for steel furniture, watertight doors, marine coatings.

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Covering specifications for internally and externally threaded fasteners and non-threaded driven fasteners, included are standards on rolling element bearings that establish properties for bearings used in automotive and aerospace applications.

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Volume 02.01 includes standards on copper and copper alloy plate, sheet, strip, rolled bar, rod bar, and shapes. Some detail the property requirements for seamless and welded tubes for ordinary use, water service, condensers, and special uses. Others cover various types of wire, including hard-drawn copper, copper-silicon alloy, and phosphor bronze.

Volume 02.02

Aluminum and Magnesium Alloys

918 Pages; 86 Standards; Available September

Print \$269

Print ISBN 978-1-6220-4871-7; Stock # S020216

Online Basic \$310; Stock # V0202

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The specifications in this volume cover aluminum, aluminum alloys, and aluminum-covered steel, including bars, rods, wire, shapes, castings, forgings, fasteners, pipes, tubes, sheet, plates, foil, and cable. It also includes ANSI H35.2 American National Standard on Dimensional Tolerances for Aluminum Mill Products.

Other standards fix the property requirements for magnesium-ingot and magnesium-alloy castings, including sheet, forgings, anodes, bars, rods, and shapes; these measure indentation hardness, shear testing, tension testing, and ultrasonic inspection.

Volume 02.03

Electrical Conductors

524 Pages; 89 Standards; Available May

Print \$167

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Volume 02.03 focuses on electrical conductors, primarily aluminum, aluminum-alloy, aluminum-covered steel, copper, copper-alloy, copper-covered steel, and steel wire. Various specifications define the required properties for stranded conductors and wire. Others detail the properties of aluminum-clad, copper-clad and core steel wire, as well as guys, messengers, and span wires.

Volume 02.04

Nonferrous Metals—Nickel, Titanium, Lead, Tin, Zinc, Zirconium, Precious, Reactive, Refractory Metals and Alloys; Materials for Thermostats, Electrical Heating and Resistance Contacts, and Connectors

1,324 Pages; 265 Standards; Available June

Print \$334

Print ISBN 978-1-6220-4873-1; Stock # S020416

Online Basic \$382; Stock # V0204

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Over half of the standards featured are specifications for nickel and nickel alloys which cover castings, forgings, pipe, tube, plate, sheet, strip, rod, bar, and wire. Also included are specifications for zinc, recycled zinc, zinc alloys, copper, gold, titanium, zirconium, and more.

Procedures for measuring such properties as cross curvature and flexivity of thermostat materials and resistance of electrical contacts to atmospheric corrosion also appear in this volume.

Volume 02.05

Metallic and Inorganic Coatings; Metal Powders and Metal Powder Products

1,098 Pages; 196 Standards; Available May

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Under the heading of metallic and inorganic coatings, specifications establish requirements for electrodeposited coatings of cadmium, tin, and mechanically-deposited zinc. This volume includes tests for measuring the properties of anodically-coated aluminum; determining coating thickness and corrosion; and electroforming, electroplating, and surface preparation.

Volume 02.05 features standards for metal powders and metal powder products. It includes test methods and specifications that deal with base metal powders, cemented carbides, refractory metal powders, density, flow rate, hardness, and particulate size. This volume also features standards for powder metallurgy (P/M) and metal injection molded (MIM) structural parts.

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Volume 03.01 covers tests and practices for mechanical testing procedures, including: machine calibration, bend and flexure testing, compression, ductility, formability, elastic properties, impact, linear thermal expansion, shear, torsion, residual stress, tension testing, structural films for MEMS, and electronic applications.

Other standards cover fatigue and fracture testing of materials, including crack tip opening displacement (CTOD), fracture toughness measurement, and linear elastic plane-strain fracture toughness of metallic materials. Also featured are metallography tests and practices that define standard optical, electron, and X-ray procedures for determining the constituents and structure of metals and alloys.

Volume 03.02

Corrosion of Metals; Wear and Erosion

1,066 Pages; 128 Standards; Available August

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Print ISBN 978-1-6220-4877-9; Stock # S030216
Online Basic \$285; Stock # V0302
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Offering procedures for measuring atmospheric corrosion, corrosion cracking, corrosion fatigue, natural waters and soil corrosion and in-plant corrosion, this volume also includes a joint ASTM/NACE standard and practices on assessing wear and erosion of materials and structures.

Volume 03.03

Nondestructive Testing

1,918 Pages; 222 Standards; Available October

Print or CD \$374

Print ISBN 978-1-6220-4878-6; Stock # S030316
Online Basic \$426; Stock # V0303
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Provides the latest standards on nondestructive testing of engineering materials, structures and assemblies to detect flaws and characterize the properties of materials. NDT methods cover:

- Reference Radiological Images—illustrating the type and degree of discontinuities found in castings and welds. Others detail the procedures required for proper radiographic examination.
- Radiology (Neutron, X, Gamma)—test methods cover calibration and measurement of CT density, radioscopic examination of weldments and quality control of radiographic film processing.
- Digital Imaging—practices and guides cover digital imaging and communication in nondestructive evaluation, including computerized transfer of radiological and ultrasonic examination data.
- Magnetic Particle and Liquid Penetrant Examination—test methods, practices, and photographs examine requirements.
- Acoustic Emission—procedures for operating acoustic emission sensors and monitoring structures.
- Ultrasonic—practices for examination of tubing, weldments, and other materials.
- Electromagnetic—procedures for electromagnetic (eddy current) examination of ferrous and nonferrous metals, and various tubular products.
- Leak Testing—procedures for leak testing of open and sealed units; also, infrared methods, NDT agencies, metals sorting and identification.

Volume 03.04

Magnetic Properties

363 Pages; 50 Standards; Available April

Print \$131

Print ISBN 978-1-6220-4879-3; Stock # S030416
Online Basic \$151; Stock # V0304
Online+ \$181; Stock # VX0304

This volume covers property requirements and measurement techniques for magnetic materials, primarily electrical steel and tests for determining alternating current and direct current properties.

Volume 03.05

Analytical Chemistry for Metals, Ores, and Related Materials: E32—Latest

1,120 Pages; 127 Standards; Available October

Print \$367

Print ISBN 978-1-6220-4880-9; Stock # S030516
Online Basic \$421; Stock # V0305
Online+ \$505; Stock # VX0305

Includes procedures for obtaining and reporting chemical analyses of ferrous and nonferrous metals, metal-bearing ores, and refractories. Also covers analytical equipment, practices for conducting proficiency tests, and reporting statistical test results.

Volume 03.06

Molecular Spectroscopy and Separation Science; Surface Analysis

856 Pages; 87 Standards; Available October

Print \$211

Print ISBN 978-1-6220-4881-6; Stock # S030616
Online Basic \$242; Stock # V0306
Online+ \$290; Stock # VX0306

Covers chromatography, fiber optics, waveguides, infrared spectroscopy, molecular luminescence, uv and visible spectroscopy. Addresses surface analysis and auger electron spectroscopy, X-ray photoelectron spectroscopy, and ion beam sputtering.

Section 4 Construction



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Online+ \$4,168; Stock # VX04CS

Volume 04.01

Cement; Lime; Gypsum

808 Pages; 138 Standards; Available September

Print \$239

Print ISBN 978-1-6220-4883-0; Stock # S040116

Online Basic \$274; Stock # V0401

Online+ \$329; Stock # VX0401

Volume 04.01 features specifications and test methods that establish the property requirements and measurement procedures for hydraulic cements, including portland, natural, pozzolanic, masonry, rapid hardening, and slag. It includes standards that define the appropriate qualities of lime and limestone and how to analyze them for environmental and industrial uses. The remaining standards address gypsum and related building materials and systems, including application procedures and related accessories, including exterior insulation and finishing systems (EIFS). ASTM's Manual of Cement Testing, a valuable companion to these standards, also appears in this volume.

Volume 04.02

Concrete and Aggregates

1,124 Pages; 184 Standards; Available October

Print \$269

Print ISBN 978-1-6220-4884-7; Stock # S040216

Online Basic \$310; Stock # V0402

Online+ \$372; Stock # VX0402

This volume includes test methods, specifications, and practices on concrete and concrete aggregates, curing materials, grout, and expansion joint fillers. These standards address abrasion testing, fluid penetration, chemical admixtures and reactions, concrete for radiation shielding, evaluation of data and laboratories, petrography, self-consolidating concrete, pervious concrete, and more. It also includes the ASTM Manual of Aggregate and Concrete Testing.

Volume 04.03

Road and Paving Materials; Vehicle-Pavement Systems

1,794 Pages; 278 Standards; Available June

Print \$343

Print ISBN 978-1-6220-4885-4; Stock # S040316

Online Basic \$392; Stock # V0403

Online+ \$470; Stock # VX0403

Specifications, tests, and practices examine the properties of various road and paving materials and explain how to measure their characteristics. They cover aggregates, bituminous mixtures, bridges, and structures; as well as highway traffic materials, such as retroreflective sheeting and pavement markers. It also includes standards on vehicle-pavement systems, including field methods for measurement of tire pavement friction, measurement and control of roughness in construction and rehabilitation of pavements, surface characteristics related to tire pavement slip resistance, and tire characteristics.

Volume 04.04

Roofing and Waterproofing

790 Pages; 172 Standards; Available June

Print or CD \$205

Print ISBN 978-1-6220-4886-1; Stock # S040416

Online Basic \$234; Stock # V0404

Online+ \$281; Stock # VX0404

Specifications, test methods, and practices focus on roofing and waterproofing materials such as asphalt roof coatings, single-ply membranes, underlayments, roll, sheeting, and EPDM roofing materials. Standards also cover bituminous emulsions; felts and fabrics; nonbituminous organic roof coverings; prepared roofings, shingles, and siding materials; roofing membrane systems; solvent-bearing bituminous compounds; surfacing and bituminous materials for membrane waterproofing.

Volume 04.05

Chemical-Resistant Nonmetallic Materials; Vitrified Clay Pipe; Concrete Pipe; Fiber-Reinforced Cement Products; Mortars and Grouts; Masonry; Precast Concrete

1,500 Pages; 238 Standards; Available June

Print \$340

Print ISBN 978-1-6220-4887-8; Stock # S040516

Online Basic \$389; Stock # V0405

Online+ \$467; Stock # VX0405

Under the heading of chemical-resistant nonmetallic materials, this volume provides specifications, tests, and practices for measuring the properties of mortars, grouts, and monolithic surfacing. Also included are standards on mortar and grout for masonry construction and manufactured masonry units. Volume 04.05 also features specifications for concrete pipe, joints, manholes, vitrified clay pipe, clay drain tile, fiber-cement products, and precast concrete products.

Volume 04.06

Thermal Insulation; Building and Environmental Acoustics

1,578 Pages; 214 Standards; Available November

Print or CD \$386

Print ISBN 978-1-6220-4889-2; Stock # S040616

Online Basic \$442; Stock # V0406

Online+ \$530; Stock # VX0406

Volume 04.06 features specifications that establish the property requirements for various types of insulation, including blanket, block, board, loose fill, and pipe. Standards on environmental acoustics address community noise, acoustical materials and systems, mechanical and electrical system noise, open plan spaces, sound absorption, and sound transmission.

Section 4, continued Construction



Volumes 04.01-04.13

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Volume 04.07

Building Seals and Sealants; Fire Standards; Dimension Stone

1,700 Pages; 199 Standards; Available November

Print \$340

Print ISBN 978-1-6220-4889-2; Stock # S040716

Online Basic \$389; Stock # V0407

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Specifications, tests, and practices detail the property requirements for caulking and glazing compounds; structural, emulsion, hot-applied, and solvent-release sealants; lock-strip gaskets; aerosol foam sealants; pipe gaskets; sealing tapes; and other building sealants. Also featured are standards on how to measure sealant properties. It includes test methods on the combustibility and fire resistance of various materials, including building construction materials, mattresses, and upholstered furniture. Other standards cover fire safety engineering and large-scale fire tests under controlled conditions. Volume 04.07 also includes standards on dimension stone, including dimension stone anchoring systems and selection of dimension stone for different applications.

Volumes 04.08 and 04.09 feature geotechnical and geoenvironmental standards that cover soil testing. Topics include compaction, sampling, field investigation, soil texture, plasticity, density characteristics, hydrological properties, hydraulic barriers, and rock for erosion control. Other standards focus on ground water and vadose zone investigations, and how to measure the properties of soil-cement. In addition, Volume 04.09 includes standards on surface and subsurface characterization, erosion and sediment control technology, frozen soils and rock, geotechnics of waste management, and information retrieval and data automation.

Volume 04.10

Wood

896 Pages; 89 Standards; Available July

Print \$249

Print ISBN 978-1-6220-4892-2; Stock # S041016

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Test methods feature how to perform chemical analysis of wood and how to evaluate mechanical and physical properties. Others detail structural grading, wood paving blocks, and modified wood.

Volume 04.11

Building Constructions (I): E72—E2110

1,548 Pages; 160 Standards; Available November

Print \$461

Print ISBN 978-1-6220-4893-9; Stock # S041116

Online Basic \$529; Stock # V0411

Online+ \$635; Stock # VX0411

Volume 04.12

Building Constructions (II): E2112—Latest; Sustainability; Asset Management; Technology and Underground Utilities

1,744 Pages; 176 Standards; Available November

Print \$293

Print ISBN 978-1-6220-4894-6; Stock # S041216

Online Basic \$335; Stock # V0412

Online+ \$401; Stock # VX0412

Volumes 04.11 and 04.12 cover standards for measuring the performance of buildings, including: air leakage and ventilation; building economics; preservation; durability; structural performance; exterior insulation and finish systems; lead hazards; roof systems, windows, and doors. Volume 04.12 includes standards on sustainability, including the design, construction, and operation of green buildings and environmental life cycle assessment. It also provides specifications for the evaluation and selection of exhibits for environmentally sustainable meetings, events, trade shows and conferences. With 4.12, you'll also have standards for designing and implementing efficient, cost-effective personal asset management systems. These standards encompass the entire life cycle of personal property and establish the guiding principles of asset management. Lastly, you'll have access to standards on technology and underground utilities such as rehabilitation of sewers that use chemical grouting techniques, seismic fragility of water conveyance systems, and deployment of optical fiber systems in natural gas pipelines.

Volume 04.13

Geosynthetics

816 Pages; 149 Standards; Available May

Print \$196

Print ISBN 978-1-6220-4895-3; Stock # S041316

Online Basic \$224; Stock # V0413

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Volume 04.13 focuses on the mechanical, endurance, permeability, and filtration properties of geosynthetics. Applications such as roadway stabilization and repair, erosion control, geomembranes, soil drainage, and reinforcement, as well as hydraulic barriers composed primarily of man-made polymer sheets or spray applied systems are included. Also featured are standards on geosynthetic clay liners.

Volume 04.08

Soil and Rock (I): D420—D5876

1,788 Pages; 209 Standards; Available March

Print \$387

Print ISBN 978-1-6220-4890-8; Stock # S040816

Online Basic \$443; Stock # V0408

Online+ \$532; Stock # VX0408

Volume 04.09

Soil and Rock (II): D5877—Latest

1,720 Pages; 165 Standards; Available April

Print \$348

Print ISBN 978-1-6220-4891-5; Stock # S040916

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Volume 05.01

Petroleum Products, Liquid Fuels, and Lubricants (I): C1234—D3710

1,850 Pages; 240 Standards; Available February

Print \$438
Print ISBN 978-1-6220-4897-7; Stock # S050116
Online Basic \$501; Stock # V0501
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Volume 05.02

Petroleum Products, Liquid Fuels, and Lubricants (II): D3711—D6122

1,904 Pages; 209 Standards; Available March

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Volume 05.03

Petroleum Products, Liquid Fuels, and Lubricants (III): D6138—D6971

1,722 Pages; 123 Standards; Available March

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Volume 05.04

Petroleum Products, Liquid Fuels, and Lubricants (IV): D6973—Latest

1,880 Pages; 129 Standards; Available March

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These **4** volumes provide over **750** standards that cover fuels, oils, lubricants, and solvents. They address alternative diesel fuels and diesel fuel blend components, (including biodiesel), ethanol, and ethanol blends. They also feature standards on motor, diesel, automotive spark-ignition engine fuel, aviation fuels, solvent hexane, naphtha, and flash point.

Also included in this volume are standards for evaluating the properties of film lubricants, lubricating greases, lubricating oil, used oils, cutting oils, turbine oils, and engine tests.

Volume 05.04 features new ASTM D7794, the first standard to identify the protocols necessary to blend mid-level ethanol fuels at the terminal and retail level that equal the fuel quality and performance expected from fuels meeting other ASTM fuel specifications.

Volume 05.05

Petroleum Products, Liquid Fuels, and Lubricants (V): D7756 - latests; Combustion Characteristics; Manufactured Carbon and Graphite Products

1,074 Pages; 123 Standards; Available February

Print \$312
Print ISBN 978-1-6220-4901-1; Stock # S050516
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Volume 05.05 covers test methods to determine characteristics of motor and aviation fuels and the ignition characteristics of diesel fuels. This volume contains all the newest standards from ASTM Committee D02 - including D794-15 Standard Test Method for Determination of Farnesane, Saturated Hydrocarbons, and Hexahydrofarnesol Content of Synthesized Iso-Paraffins (SIP) Fuel for Blending with Jet Fuel by Gas Chromatographer.

Volume 05.06

Gaseous Fuels; Coal and Coke; Bioenergy and Industrial Chemicals from Biomass; Catalysts

1,172 Pages; 184 Standards; Available September

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This volume provides tests and practices to evaluate the properties of gaseous fuels, coal and coke. This volume includes standards on bioenergy and industrial chemicals from biomass, and covers characterization, manufacturing, and sustainability. It includes tests that evaluate catalytic materials, and standards for performing chemical and physical tests on manufactured carbon and graphite products.

Section 6 Paints, Related Coatings, and Aromatics



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1,588 Pages; 264 Standards; Available February

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This volume features the latest test methods for the chemical analysis of paints and paint materials, including determination of volatiles, nonvolatiles, pigments, water content, and other constituents. Other standards focus on accelerated testing, physical properties of applied paint films, such as film thickness and adherence, physical strength, resistance to chemicals and environmental factors, as well as the physical and optical properties of liquid paints.

In addition, Volume 06.01 includes tests and practices on color and appearance analysis, color order systems, fluorescence, high visibility materials for individual safety, image based color measurement, photoluminescent safety markings, retroreflective materials, spectrophotometry and colorimetry, and visual methods.

Volume 06.02

Paint—Products and Applications; Protective Coatings; Pipeline Coatings

1,400 Pages; 269 Standards; Available February

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Volume 06.02 covers architectural finishes and paint products, such as traffic coatings, marine coatings, industrial protective coatings, and masonry treatments. Standards examine paint applications in factories, coil metal, coatings on preformed products, printing inks, artists' paints, and paint application tools. Other subject areas include the determination of graffiti resistance and definitions for problems that develop with printed matter as a result of deficiencies in ink, substrate, or press. Tests for applying and evaluating protective coatings and linings in power generation facilities, and standards on the durability of pipeline coatings and linings also appear in this volume.

Volume 06.03

Paint—Pigments, Polymers, Resins, Naval Stores, Cellulosic Esters, and Ink Vehicles

698 Pages; 143 Standards; Available March

Print \$281

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Volume 06.03 includes specifications and test methods that establish property requirements for various pigments, including white, black, bronze, blue, and red; resins; and polymers.

Other standards pertain to naval stores, primarily rosins, cellulose and cellulose derivatives, and ink vehicles, and hydrocarbon resins.

Volume 06.04

Paint—Solvents; Aromatic Hydrocarbons

808 Pages; 169 Standards; Available March

Print \$234

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This volume features specifications that establish the standard property requirements for various solvents, including aromatic hydrocarbons, alcohols, ketones, and esters. Accompanying the specifications are tests that define standard procedures for conducting physical and chemical tests on solvents and for determining solubility and miscibility. Others cover aromatic hydrocarbons and related chemicals, excluding those used as fuels or lubricants.

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Volume 07.02

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- Glass fiber
- Home furnishings
- Inflatable restraints
- Pile floor coverings

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- Tire cord and fabrics

Volume 07.02 also contains standard body measurement charts used for the sizing of apparel for men, women, children, and infants; standard guidelines for care labeling of apparel and other textile products; standards for UV protective fabrics and clothing; and a practice for stitches and seams, which has replaced the Federal standard for apparel end item stitch and seam structures used worldwide by government and industry textile organizations.

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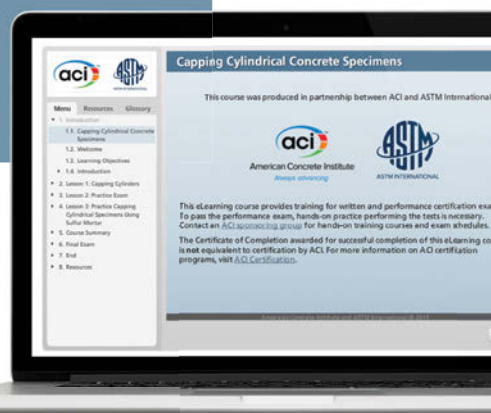
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Plastics (I): C1147—D3159

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Volume 08.02

Plastics (II): D3222—D5083

918 Pages; 130 Standards; Available June

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Volume 08.03

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These 3 volumes feature over **480** plastics-related standards, including test methods that establish standard procedures for assessing physical, mechanical, optical, permanence, and thermal properties.

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- Reinforced Plastic Piping Systems and Chemical Equipment—covers testing requirements for glass-fiber-reinforced thermosetting resin pipes, fittings, and joints; and establish chemical resistance of thermosetting resins.

Volume 08.04

Plastic Piping Systems

1,788 Pages; 232 Standards; Available January

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Volume 09.01

Rubber, Natural and Synthetic—General Test Methods; Carbon Black

1,360 Pages; 211 Standards; Available July

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Volume 09.01 contains tests and practices for evaluating rubber, rubber-like materials, and carbon black. Some general tests and practices fix standard procedures for performing chemical analysis, assessing processability, physical properties, aging and weathering effects, low temperature effects, and adhesion. Others evaluate

compounding materials, carbon black, and synthetic rubbers, such as CR, IIR, IR, NBR, BR, and SBR. This volume also details standards on natural rubber, thermoplastic elastomers, and terminology.

Volume 09.02

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822 Pages; 128 Standards; Available August

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Volume 09.02 features specifications, tests, and practices for evaluating rubber surgical and examination gloves, automotive and aeronautical rubber, packing, seals, gasket materials, hose and belting, coated fabrics, latex foam, sponge, expanded cellular rubber, and tires.

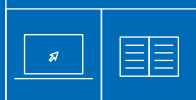
It also provides standards on gaskets used in transportation applications, as well as standards related to commercial nonmetallic gaskets, enveloped gaskets, and laminate composite gasket materials (LCGM) for use with corrosion-resistant process equipment.



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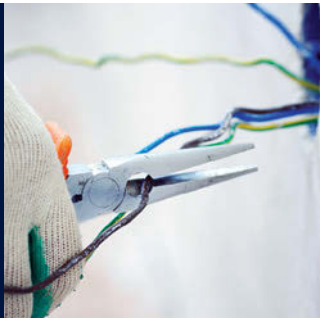
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570 Pages; 55 Standards; Available May

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Volume 10.02

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- Electric heating unit insulation and electrical tests
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Volume 10.03

Electrical Insulating Liquids and Gases; Electrical Protective Equipment

678 Pages; 95 Standards; Available May

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Volume 10.03 provides guides, practices, specifications on electrical insulating liquids and gases, as well as chemical, physical, analytical, and electrical test methods.

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Volume 10.04

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1,382 Pages; 142 Standards; Available April
Print \$312
Print ISBN 978-1-6220-4925-7; Stock # S110116
Online Basic \$358; Stock # V1101
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Volume 11.02 Water (II)

1,666 Pages; 213 Standards; Available May
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Online Basic \$369; Stock # V1102
Online+ \$443; Stock # VX1102

Volume 11.01 and 11.02 provide standard procedures for assessing water. Topics cover: reagent water, wastewater, fluvial sediment, water sampling and analysis, general properties of water, inorganic constituents and methods of radiochemical analysis.

Volume 11.03 Occupational Health and Safety; Protective Clothing

784 Pages; 94 Standards; Available October
Print \$190
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Occupational Health and Safety standard practices and guides look at the health and safety aspects of various working environments. Standards also cover hazard communications and the safe handling of metal working fluids. Protective Clothing standards evaluate the performance of biological, chemical, physical, flame-resistant, and thermal protective clothing.

Volume 11.04 Waste Management

910 Pages; 110 Standards; Available September
Print \$202

Print ISBN 978-1-6220-4928-8; Stock # S110415
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Tests, practices, and guides address medical waste, municipal solid waste, sampling and monitoring, physical and chemical characterization, site remediation, treatment, recovery and reuse, and processing equipment.

Volume 11.05 Environmental Assessment, Risk Management and Corrective Action

1,076 Pages; 48 Standards; Available August
Print \$249
Print ISBN 978-1-6220-4929-5; Stock # S110515
Online Basic \$284; Stock # V1105
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Environmental Assessment—includes the popular ASTM Phase I Environmental Site Assessment (ESA) standard (E1527) and Phase II ESA standard (E1903). Other standards address corrective action, environmental risk management, pollution prevention, real estate assessment and management, Brownfield redevelopment, property condition assessments (PCAs), mold baseline survey process, asbestos screens, use of activity and use limitations (AULs), and screening for vapor encroachment. It also covers financial disclosures and risks attributed to climate change assessment.

Volume 11.06 Environmental, Biological Effects and Environmental Fate

1,220 Pages; 69 Standards; Available August
Print \$298
Print ISBN 978-1-6220-4930-1; Stock # S110616
Online Basic \$346; Stock # V1106
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11.06 covers Environmental Assessment, Risk Management and Corrective Action and features standards on aquatic sediment;

terrestrial assessments and toxicology; environmental fate of chemical substances; and risk assessment, communication, and management.

Volume 11.07 Air Quality

1,814 Pages; 174 Standards; Available October
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Volume 11.07 provides standards on air quality in outdoor, indoor, and workplace environments. Analysis includes inorganic compounds (e.g., lead, mercury, beryllium, various sulfur and nitrogen compounds), organic compounds (e.g., formaldehyde, volatile organic compounds, pesticides, and PAH), and other damaging agents. Also included are standards for measuring and analyzing meteorological parameters.

Volume 11.08 Water and Environmental Technology

854 Pages; 163 Standards; Available August
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Volume 11.07 provides standards on air quality in outdoor, indoor, and workplace environments. Analysis includes inorganic compounds (e.g., lead, mercury, beryllium, various sulfur and nitrogen compounds), organic compounds (e.g., formaldehyde, volatile organic compounds, pesticides, and PAH), and other damaging agents. Also included are standards for measuring and analyzing meteorological parameters.

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Volume 12.01

Nuclear Energy (I)

1,534 Pages; 170 Standards; Available August

Print \$325

Print ISBN: 978-1-6220-4934-9; Stock #: S120116

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Volume 12.02

Nuclear (II), Solar, and Geothermal Energy; Radiation Processing

1,408 Pages; 157 Standards; Available September

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Print ISBN: 978-1-6220-4935-6; Stock #: S120216

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These two volumes feature 328 standards.

Volume 12.01 focuses on materials for nuclear reactor applications and covers:

- Fuel and Fertile Materials—property requirements for fuel and other related subjects.
- Nuclear Grade Materials—standard procedures for chemical, mass spectrometric, spectrochemical, nuclear, and radiochemical analysis of these materials.

Volume 12.02 covers:

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- Solar Energy—covers solar heating and cooling systems, measuring spectral response of photovoltaic cells or transmittance, and reflectance of sheet materials.
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- B01 Electrical Conductors
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- C01 Cement
- C03 Chemical-Resistant Nonmetallic Materials
- C04 Vitrified Clay Pipe
- C07 Lime and Limestone
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- C09 Concrete and Concrete Aggregates
- C11 Gypsum and Related Building Materials and Systems
- C12 Mortars and Grouts for Unit Masonry
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- C18 Dimension Stone
- C21 Ceramic Whitewares and Related Products
- C24 Building Seals and Sealants
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- D26 Halogenated Organic Solvents and Fire Extinguishing Agents
- D27 Electrical Insulating Liquids and Gases
- D28 Activated Carbon
- D30 Composite Materials
- D31 Leather
- D32 Catalysts
- D33 Protective Coating and Lining Work for Power Generation Facilities
- D34 Waste Management
- D35 Geosynthetics

E. MISCELLANEOUS SUBJECTS

- E01 Analytical Chemistry for Metals, Ores and Related Materials
- E04 Metallography
- E05 Fire Standards
- E06 Performance of Buildings
- E07 Nondestructive Testing
- E08 Fatigue and Fracture
- E10 Nuclear Technology and Applications
- E11 Quality and Statistics
- E12 Color and Appearance
- E13 Molecular Spectroscopy and Separation Science
- E15 Industrial and Specialty Chemicals
- E17 Vehicle - Pavement Systems
- E18 Sensory Evaluation
- E20 Temperature Measurement
- E21 Space Simulation and Applications of Space Technology
- E27 Hazard Potential of Chemicals
- E28 Mechanical Testing
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- E31 Healthcare Informatics
- E33 Building and Environmental Acoustics
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- E37 Thermal Measurements
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- E43 SI Practice
- E44 Solar, Geothermal and Other Alternative Energy Sources
- E47 Biological Effects and Environmental Fate
- E48 Biotechnology
- E50 Environmental Assessment, Risk Management, and Corrective Action
- E52 Forensic Psychophysiology
- E53 Asset Management
- E54 Homeland Security Applications
- E55 Manufacture of Pharmaceutical Products
- E56 Nanotechnology
- E57 3D Imaging System
- E58 Forensic Engineering
- E60 Sustainability
- E61 Radiation Processing
- E62 Industrial Biotechnology

F. MATERIALS FOR SPECIFIC APPLICATIONS

- F01 Electronics
- F02 Flexible Barrier Packaging
- F03 Gaskets
- F04 Medical and Surgical Materials and Devices
- F05 Business Imaging Products
- F06 Resilient Floor Coverings
- F07 Aerospace and Aircraft
- F08 Sports Equipment, Playing Surfaces, and Facilities
- F09 Tires
- F10 Livestock, Meat, and Poultry Evaluation Systems
- F11 Vacuum Cleaners
- F12 Security Systems and Equipment
- F13 Pedestrian/Walkway Safety and Footwear
- F14 Fences
- F15 Consumer Products
- F16 Fasteners
- F17 Plastic Piping Systems
- F18 Electrical Protective Equipment for Workers
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- F23 Personal Protective Clothing and Equipment
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- F27 Snow Skiing
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- F33 Detention and Correctional Facilities
- F34 Rolling Element Bearings
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- F37 Light Sport Aircraft
- F38 Unmanned Aircraft Systems
- F39 Aircraft Systems
- F40 Declarable Substances in Materials
- F41 Unmanned Maritime Vehicle Systems (UMVS)
- F42 Additive Manufacturing Technologies
- F43 Language Services and Products
- F44 General Aviation Aircraft
- F45 Driverless Automatic Guided Vehicles

G. CORROSION, DETERIORATION, AND DEGRADATION OF MATERIALS

- G01 Corrosion of Metals
- G02 Wear and Erosion
- G03 Weathering and Durability
- G04 Compatibility and Sensitivity of Materials in Oxygen Enriched Atmospheres

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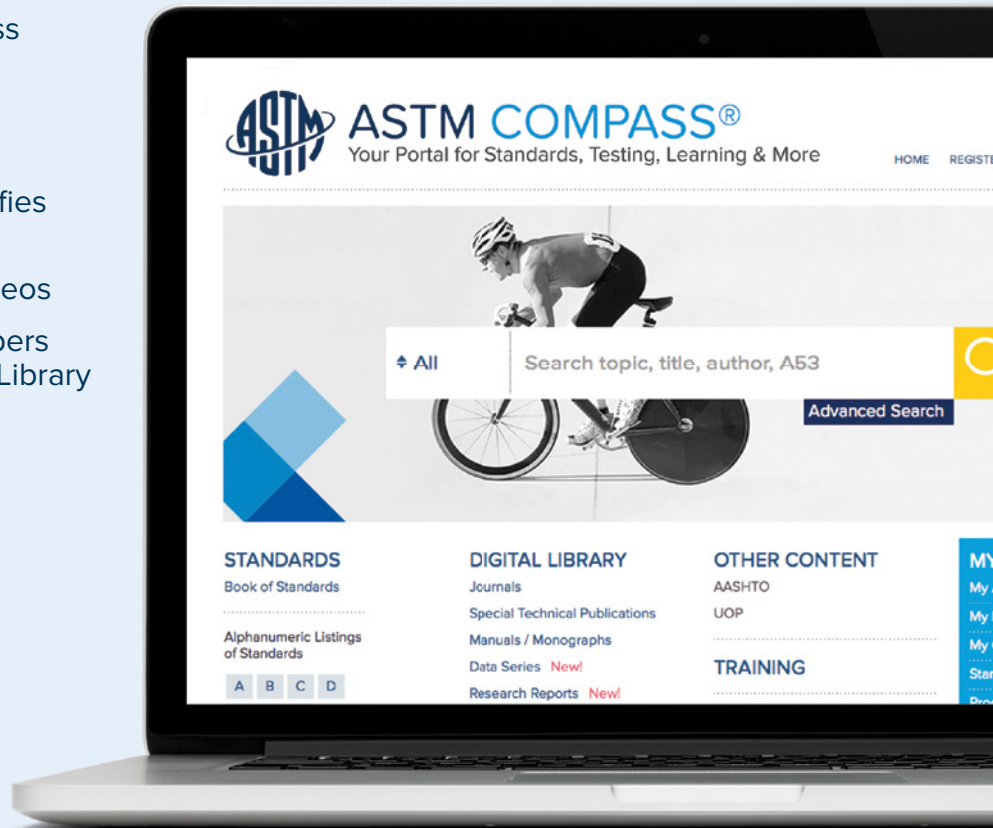
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