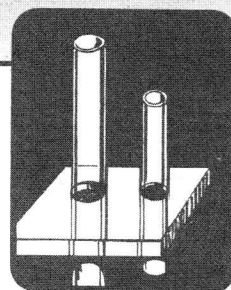


ANNUAL BOOK OF ASTM STANDARDS

2002

SECTION EIGHT

Plastics



VOLUME 08.02

Plastics (II): D 2383–D 4322

Revision issued annually

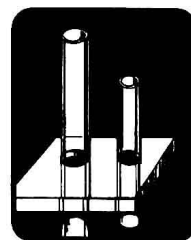


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2002

SECTION 8

Plastics



VOLUME 08.02

Plastics (II): D 2383 – D 4322

Includes standards of the following committees:
D20 on Plastics

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Foreword

Organized in 1898, ASTM International has grown into one of the largest voluntary standards development systems in the world. ASTM International is a not-for-profit organization which provides a forum for producers, users, ultimate consumers, and those having a general interest (representatives of government and academia) to meet on common ground and write standards for materials, products, systems, and services.

From the work of 130 standards-writing committees, ASTM International publishes more than 11,000 standards each year. These standards and other related technical information are accepted and used throughout the world.

ASTM International Headquarters has no technical research or testing facilities; such work is done voluntarily by 30,000 technically qualified ASTM members located throughout the world. Membership in the Society is open to all concerned with the fields in which ASTM is active. A membership application may be obtained from Member and Committee Services, ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959; tel. 610-832-9694 or from the ASTM website, www.astm.org under Membership.

2002 Annual Book of ASTM Standards

The 2002 *Annual Book of ASTM Standards* consists of 76 volumes, divided among 16 sections, of which this volume is one. It contains approved ASTM standards, provisional standards, and related material. These terms are defined as follows in the *Regulations Governing ASTM Technical Committees*:

Categories:

standard, n—as used in ASTM, a document that has been developed and established within the consensus principles of the Society and that meets the approval requirements of ASTM procedures and regulations.

standard, adj—as used in ASTM, a descriptive used in titles of test methods, specifications, and other documents to indicate consensus approval in accordance with ASTM procedures and regulations.

provisional standard—a document published for a limited period of time by the Society to meet a demand for more rapid issuance of specific documents, such as an emergency situation, regulatory requirements, or other special circumstances.

Discussion—Provisional standards are not full consensus documents because they require subcommittee consensus only. (See *Regulations Governing ASTM Technical Committees*, Section 14.)

Types:

The various types of ASTM documents are to provide a flexibility of form, communication, and usage for both the technical committees and the myriad users of ASTM documents. The type of ASTM document that is developed and titled is based on the technical content and intended use, not on the degree of consensus achieved. The two categories of ASTM documents (standard and provisional standard) can be of the following forms and types:

classification—a systematic arrangement or division of materials, products, systems, or services into groups based on similar characteristics such as origin, composition, properties, or use.

guide—a compendium of information or series of options that does not recommend a specific course of action.

Discussion—A guide increases the awareness of information and approaches in a given subject area.

practice—a definitive set of instructions for performing one or more specific operations or functions that does not produce a test result.

FOREWORD

Discussion—Examples of practices include, but are not limited to: application, assessment, cleaning, collection, decontamination, inspection, installation, preparation, sampling, screening, and training.

specification—an explicit set of requirements to be satisfied by a material, product, system, or service.

Discussion—Examples of specifications include, but are not limited to, requirements for: physical, mechanical, or chemical properties, and safety, quality, or performance criteria. A specification identifies the test methods for determining whether each of the requirements is satisfied.

terminology—a document comprising definitions of terms; explanations of symbols, abbreviations, or acronyms.

test method—a definitive procedure that produces a test result.

Discussion—Examples of test methods include, but are not limited to: identification, measurement, and evaluation of one or more qualities, characteristics, or properties. A precision and bias statement shall be reported at the end of a test method. (See *Form and Style for ASTM Standards*, Section A21, Precision and Bias.)

A new edition of the Book of Standards is published annually because of additions of new standards and significant revisions to existing standards. Approximately 30 % of each volume is new or revised. Each volume contains all actions approved by the Society at least six months before the publication date. New and revised standards approved by the Society between the annual editions of any given volume are made available as separate copies. Users are cautioned to follow the most current issue of a standard except when a specific edition of a standard is cited, for example, as in a contract.

Development and Use of ASTM Standards

ASTM believes that technically competent standards result when a full consensus of all concerned parties is achieved and rigorous due process procedures are followed. This philosophy and standards development system ensure technically competent standards having the highest credibility when critically examined and used as the basis for commercial, legal, or regulatory actions.

ASTM standards are developed voluntarily and used voluntarily. Standards become legally binding only when a government body references them in regulations, or when they are cited in a contract. Any item that is produced and marked as conforming to an ASTM standard must meet all applicable requirements of that standard.

ASTM standards are used by thousands of individuals, companies, and agencies. Purchasers and sellers incorporate standards into contracts; scientists and engineers use them in laboratories; architects and designers use them in plans; government agencies reference them in codes, regulations, and laws; and many others refer to standards for guidance.

Consideration of Comments on ASTM Standards

An ASTM standard is subject to revision at any time by the responsible technical committee and must be reviewed every five years and if not revised, either reapproved or withdrawn. Your comments are invited either for revision of any standard or for the development of new standards and should be addressed to ASTM Headquarters. Your comments will receive careful consideration at a meeting of the responsible technical committee, which you may attend. If you feel your comments have not received a fair hearing you should make your views known to the ASTM Committee on Standards, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428.

Using the Annual Book of ASTM Standards

The standards are assembled in each volume in alphanumeric sequence of their ASTM designation numbers. Volumes 03.06, 04.09, 05.05, 05.06, and 06.03 are assembled first by committee, then in alphanumeric sequence. Each volume has a table of contents, listing the standards in alphanumeric sequence by ASTM designation; and a list by subjects, categorizing the standards according to subject. A subject index of the standards in each volume appears at the back of each volume.

Availability of Individual Standards

Each ASTM standard is available as a separate copy from ASTM International. Standards can be ordered from the ASTM website at www.astm.org, in the store section. Standards can also be ordered from Customer Services

FOREWORD

at 610–832–9585, Monday through Friday, 8:30 AM to 4:30 PM Eastern Standard Time.

Caveat Statements and Policies in Standards

ASTM caveat statements on Safety Hazards and Fire Hazards are required to appear in standards where appropriate. They are located in the scope section of applicable standards. The caveats on General Statement of ASTM Policy and Patents are contained in all standards and located at the end of each standard. For more information on the caveats see Section F2 of the *Form and Style for ASTM Standards*.



Section 1—Iron and Steel Products

- Volume 01.01 Steel—Piping, Tubing, Fittings
- Volume 01.02 Ferrous Castings; Ferroalloys
- Volume 01.03 Steel—Plate, Sheet, Strip, Wire; Stainless Steel Bar
- Volume 01.04 Steel—Structural, Reinforcing, Pressure Vessel, Railway
- Volume 01.05 Steel—Bars, Forgings, Bearing, Chain, Springs
- Volume 01.06 Coated Steel Products
- Volume 01.07 Ships and Marine Technology
- Volume 01.08 Fasteners; Rolling Element Bearings

Section 2—Nonferrous Metal Products

- Volume 02.01 Copper and Copper Alloys
- Volume 02.02 Aluminum and Magnesium Alloys
- Volume 02.03 Electrical Conductors
- Volume 02.04 Nonferrous Metals—Nickel, Cobalt, Lead, Tin, Zinc, Cadmium, Precious, Reactive, Refractory Metals and Alloys; Materials for Thermostats, Electrical Heating and Resistance, Contacts, and Connectors
- Volume 02.05 Metallic and Inorganic Coatings; Metal Powders, Sintered P/M Structural Parts

Section 3—Metals Test Methods and Analytical Procedures

- Volume 03.01 Metals—Mechanical Testing; Elevated and Low-Temperature Tests; Metallography
- Volume 03.02 Wear and Erosion; Metal Corrosion
- Volume 03.03 Nondestructive Testing
- Volume 03.04 Magnetic Properties
- Volume 03.05 Analytical Chemistry for Metals, Ores, and Related Materials (I): E 32 - E 1724
- Volume 03.06 Analytical Chemistry for Metals, Ores, and Related Materials (II): E 1763 - latest; Molecular Spectroscopy; Surface Analysis

Section 4—Construction

- Volume 04.01 Cement; Lime; Gypsum
- Volume 04.02 Concrete and Aggregates
- Volume 04.03 Road and Paving Materials; Vehicle-Pavement Systems
- Volume 04.04 Roofing, Waterproofing, and Bituminous Materials
- Volume 04.05 Chemical-Resistant Nonmetallic Materials; Vitrified Clay Pipe, Concrete Pipe, Fiber-Reinforced Cement Products; Mortars and Grouts; Masonry
- Volume 04.06 Thermal Insulation; Environmental Acoustics
- Volume 04.07 Building Seals and Sealants; Fire Standards; Dimension Stone
- Volume 04.08 Soil and Rock (I): D 420 - D 5779
- Volume 04.09 Soil and Rock (II): D 5780 - latest; Geosynthetics
- Volume 04.10 Wood
- Volume 04.11 Building Constructions (I): E 72 - E 1670
- Volume 04.12 Building Constructions: Property Management Systems (II): E 1671 - latest

Section 5—Petroleum Products, Lubricants, and Fossil Fuels

- Volume 05.01 Petroleum Products and Lubricants (I): D 56 - D 2596
- Volume 05.02 Petroleum Products and Lubricants (II): D 2597 - D 4927
- Volume 05.03 Petroleum Products and Lubricants (III): D 4928 - D 5950
- Volume 05.04 Petroleum Products and Lubricants (IV): D 5966 - latest
- Volume 05.05 Test Methods for Rating Motor, Diesel, and Aviation Fuels; Catalysts; Manufactured Carbon and Graphite Products
- Volume 05.06 Gaseous Fuels; Coal and Coke

Section 6—Paints, Related Coatings, and Aromatics

- Volume 06.01 Paint—Tests for Chemical, Physical, and Optical Properties; Appearance

LISTED BY SECTION AND VOLUME

- Volume 06.02 Paint—Products and Applications; Protective Coatings; Pipeline Coatings
- Volume 06.03 Paint—Pigments, Drying Oils, Polymers, Resins, Naval Stores, Cellulosic Esters, and Ink Vehicles
- Volume 06.04 Paint—Solvents; Aromatic Hydrocarbons

Section 7—Textiles

- Volume 07.01 Textiles (I): D 76 - D 3218
- Volume 07.02 Textiles (II): D 3333 - latest

Section 8—Plastics

- Volume 08.01 Plastics (I): D 256 - D 2343
- Volume 08.02 Plastics (II): D 2383 - D 4322
- Volume 08.03 Plastics (III): D 4329 - latest
- Volume 08.04 Plastic Pipe and Building Products

Section 9—Rubber

- Volume 09.01 Rubber, Natural and Synthetic—General Test Methods; Carbon Black
- Volume 09.02 Rubber Products, Industrial—Specifications and Related Test Methods; Gaskets; Tires

Section 10—Electrical Insulation and Electronics

- Volume 10.01 Electrical Insulation (I): D 69 - D 2484
- Volume 10.02 Electrical Insulation (II): D 2518 - latest
- Volume 10.03 Electrical Insulating Liquids and Gases; Electrical Protective Equipment
- Volume 10.04 Electronics (I)
- Volume 10.05 Electronics (II)

Section 11—Water and Environmental Technology

- Volume 11.01 Water (I)
- Volume 11.02 Water (II)
- Volume 11.03 Atmospheric Analysis; Occupational Health and Safety; Protective Clothing
- Volume 11.04 Environmental Assessment; Hazardous Substances and Oil Spill Responses; Waste Management
- Volume 11.05 Biological Effects and Environmental Fate; Biotechnology; Pesticides

Section 12—Nuclear, Solar, and Geothermal Energy

- Volume 12.01 Nuclear Energy (I)
- Volume 12.02 Nuclear (II), Solar, and Geothermal Energy

Section 13—Medical Devices and Services

- Volume 13.01 Medical Devices; Emergency Medical Services

Section 14—General Methods and Instrumentation

- Volume 14.01 Healthcare Informatics
- Volume 14.02 General Test Methods; Forensic Sciences; Terminology; Conformity Assessment; Statistical Methods
- Volume 14.03 Temperature Measurement
- Volume 14.04 Laboratory Apparatus; Degradation of Materials; Filtration; SI; Oxygen Fire Safety

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

- Volume 15.01 Refractories; Activated Carbon; Advanced Ceramics
- Volume 15.02 Glass; Ceramic Whitewares
- Volume 15.03 Space Simulation; Aerospace and Aircraft; Composite Materials
- Volume 15.04 Soaps and Other Detergents; Polishes; Leather; Resilient Floor Coverings
- Volume 15.05 Engine Coolants; Halogenated Organic Solvents and Fire Extinguishing Agents; Industrial and Specialty Chemicals
- Volume 15.06 Adhesives
- Volume 15.07 Sports Equipment; Safety and Traction for Footwear; Amusement Rides; Consumer Products
- Volume 15.08 Sensory Evaluation; Vacuum Cleaners; Security Systems; Detention Facilities; Food Service Equipment
- Volume 15.09 Paper; Packaging; Flexible Barrier Materials; Business Imaging Products

Section 00—Index

- Volume 00.01 Subject Index; Alphanumeric List



Listed by Subjects

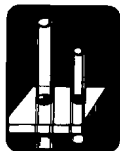
SUBJECTS	VOLUME	SUBJECTS	VOLUME
Acoustic, Environmental	04.06	Containers:	
Activated Carbon	15.01	Aerosol.....	15.09
Adhesives	15.06	Glass	15.02
Advanced Ceramics	15.01	Shipping	15.09
Aerosols	15.09	Coolants, Engine	15.05
Aerospace Industry Methods	15.03	Copper and Copper Alloys	02.01
Aggregates	04.02, 04.03	Corrosion, Metal	03.02
Aluminum and Aluminum Alloys	02.02	Detention and Correctional Facilities	15.08
Amusement Rides and Devices	15.07	Die-Cast Metals.....	02.01, 02.02, 02.04
Analytical Atomic Spectroscopy	03.05, 03.06	Dimension Stone	04.07
Anesthetic and Respiratory Equipment	13.01	Dosimetry	12.02
Appearance of Materials	06.01	Ductile Iron	01.02
Aromatic Hydrocarbons and Related Chemicals	06.04	Durability of Nonmetallic Materials:	
Atmospheric Analysis	11.03	Pipeline Coatings.....	06.02
Biological Effects and Environmental Fate	11.05	Electrical Conductors.....	02.03
Biotechnology	11.05	Electrical Contacts and Connectors.....	02.04
Bituminous Materials	04.03	Electrical Insulating Materials.....	10.01, 10.02, 10.03
Building Constructions	04.11, 04.12	Electrical Protective Equipment for Workers	10.03
Building Seals and Sealants	04.07	Electronics	10.04, 10.05
Business Imaging Products	15.09	Emergency Medical Services.....	13.01
Carbon Black	09.01	Emission Spectroscopy.....	03.05, 03.06
Carbon Products, Manufactured	15.01	Environmental Assessment	11.04
Cast Iron	01.02	Erosion and Wear	03.02
Catalysts	05.05	Exposure Tests	14.02
Cellulose	06.02	Fasteners	01.08
Cement	04.01	Fatigue	03.01
Hydraulic	04.01	Fences	01.06
Rubber	09.01	Ferroalloys	01.02
Ceramic Materials	15.02	Ferrous Castings	01.02
Advanced Ceramics	15.01	Fiber-Reinforced Cement Products	04.05
Ceramic Whitewares	15.02	Filtration	14.04
Ceramics for Electronics	15.02	Fire Standards	04.07
Porcelain Enamel	02.05	Flexible Barrier Materials	15.09
Chemical Analysis of Metals	03.05, 03.06	Food Service Equipment	15.08
Chemical-Resistant Nonmetallic Materials	04.05	Footwear, Safety and Traction for	15.07
Chemicals, Industrial	15.05	Forensic Sciences	14.02
Closures	15.09	Fracture Testing	03.01
Coal and Coke	05.06	Gaseous Fuels	05.06
Compatibility and Sensitivity of Materials in Oxygen-Enriched Atmospheres	14.04	Gaskets	09.02
Composite Materials	15.03	General Test Methods	14.02
Concrete and Concrete Aggregates	04.02	Geosynthetics and Related Products	04.09
Concrete Pipe	04.05	Geothermal Resources and Energy	12.02
Concrete Products, Precast	04.05	Glass	15.02
Concrete Reinforcing Steel	01.04	Graphite Products, Manufactured	15.01
Conformity Assessment	14.02	Graphite Products, Nuclear	12.02
Consumer Products	15.07	Grouts for Unit Masonry	04.05
		Gypsum	04.01

LISTED BY SUBJECTS

SUBJECTS	VOLUME	SUBJECTS	VOLUME
Halogenated Organic Solvents and Fire Extinguishing Agents	15.05	Property Management Systems	04.12
Hazard Potential of Chemicals	14.02	Protective Clothing	11.03
Hazardous Substances and Oil Spill Response	11.04	Protective Coating and Lining Work for Power Generation Facilities	06.02
Healthcare Informatics	14.01	Protective Equipment, Electrical, for Workers	10.03
Health Care Services and Equipment	13.01	Quality and Statistics	14.02
Imaging Products, Business	15.09	Radioisotopes and Radiation Effects	12.02
Index (for all volumes)	00.01	Reactive and Refractory Metals	02.04
Industrial and Specialty Chemicals	15.05	Refractories	15.01
Iron Castings	01.02	Resilient Floor Coverings	15.04
Knock Test Manual	05.04	Road and Paving Materials	04.03
Laboratory Apparatus	14.04	Robotics	14.01
Leather	15.04	Rolling Element Bearings	01.08
Lime	04.01	Roofing, Waterproofing, and Bituminous Materials ...	04.04
Magnesium and Magnesium Alloys	02.02	Rubber	09.01, 09.02
Magnetic Properties	03.04	Search and Rescue	13.01
Malleable Iron	01.02	Security Systems and Equipment	15.08
Marine Technology	01.07	Sensory Evaluation of Materials and Products	15.08
Masonry Units	04.05	Ships	01.07
Medical and Surgical Materials and Devices	13.01	SI Practice	14.04
Metallic and Inorganic Coatings	02.05	Sintered P/M Structural Parts	02.05
Metallography	03.01	Skiing, Snow	15.07
Metal Powders	02.05	Soaps	15.04
Metals, Chemical Analysis	03.05, 03.06	Soil and Rock	04.08, 04.09
Metals, Effect of Temperature on Properties	03.01	Solar Energy Conversion	12.02
Metals, Physical and Mechanical Testing	03.01	Solvents	06.04
Molecular Spectroscopy	03.06	Space Simulation	15.03
Mortars and Grouts for Unit Masonry	04.05	Spectroscopy	03.06
Naval Stores	06.03	Sports Equipment and Facilities	15.07
Nickel and Nickel Alloys	02.04	Statistical Methods	14.02
Nondestructive Testing	03.03	Steel:	
Nonferrous Metals, General	02.04	Bars	01.05
Nuclear Materials	12.01, 12.02	Bearing Steel	01.05
Occupational Health and Safety	11.03	Bolting	01.01
Oil Spill Response, Hazardous Substances	11.04	Castings	01.02
Ores, Metal Bearing, Sampling and Analysis ..	03.05, 03.06	Chain	01.05
Orthotics, External Prosthetics, and Mobility Aids ...	13.01	Concrete Reinforcing	01.04
Packaging	15.09	Detention and Correctional Facilities	04.07
Paint and Related Coatings and Materials:		Fasteners	01.08
Pigments, Resins, and Polymers	06.03	Forgings	01.04, 01.05
Products and Applications	06.02	Galvanized	01.06
Solvents	06.04	Piping, Tubing, and Fittings	01.01
Tests for Chemical, Physical, and Optical Properties	06.01	Plate, Sheet, and Strip	01.03
Paper	15.09	Pressure Vessel Plate and Forgings	01.04
Particle and Spray Characterization	14.02	Rails, Wheels, and Tires	01.04
Pesticides	11.05	Springs	01.05
Petroleum Products and Lubricants	05.01, 05.02, 05.03, 05.04, 05.05	Stainless Steel	01.01, 01.02, 01.03, 01.04, 01.05
Plastic Pipe and Building Products	08.04	Structural Steel	01.04
Plastics	08.01, 08.02, 08.03	Wire	01.03
Polishes	15.04	Surface Analysis	03.06
Porcelain Enamel	02.05	Surgical Materials and Devices	13.01
Pressure Vessel Plate and Forgings	01.04	Temperature Measurement	14.03
Products Liability Litigation, Technical Aspects of ...	14.02	Terminology	14.02
		Textiles	07.01, 07.02
		Thermal Insulation	04.06

LISTED BY SUBJECTS

SUBJECTS	VOLUME	SUBJECTS	VOLUME
Thermal Measurements	14.02	Vehicle-Pavement Systems	04.03
Thermocouples	14.03	Vitrified Clay Pipe.....	04.05
Thermostats, Electrical Heating and Resistance, Con- tacts, and Connectors	02.04	Waste Management.....	11.04
Tires.....	09.02	Water	11.01, 11.02
Traveled Surface Characteristics.....	04.03	Wear and Erosion	03.02
Vacuum Cleaners.....	15.08	Weathering and Durability.....	14.04
		Wood.....	04.10



List by Subjects

2002 ANNUAL BOOK OF ASTM STANDARDS, VOLUMES 08.01, 08.02, AND 08.03

PLASTICS

A complete Subject Index appears at the end of this volume.

Since the standards in this volume are arranged in alphanumeric sequence, no page numbers are given in this list by subjects.

PLASTICS

Analytical Methods

Test Methods for:

*D 2238 – 92(1999)	Absorbance of Polyethylene Due to Methyl Groups at 1378 cm^{-1}
*D 4094 – 00	Acid Content of Ethylene-Acrylic Acid Copolymers
D 2124 – 99 ^{€1}	Analysis of Components in Poly(Vinyl Chloride) Compounds Using an Infrared Spectrophotometric Technique
D 6247 – 98	Analysis of Elemental Content in Polyolefins By X-Ray Fluorescence Spectrometry
*§D 1895 – 96	Apparent Density, Bulk Factor, and Pourability of Plastic Materials
*D 5630 – 01	Ash Content in Plastics
*§D 1603 – 01	Carbon Black In Olefin Plastics
*D 3594 – 93(2000)	Copolymerized Ethyl Acrylate In Ethylene-Ethyl Acrylate Copolymers
D 792 – 00	Density and Specific Gravity (Relative Density) of Plastics by Displacement
*§D 1505 – 98 ^{€1}	Density of Plastics by the Density-Gradient Technique
*D 4883 – 99	Density of Polyethylene by the Ultrasound Technique
*D 4275 – 96	Determination of Butylated Hydroxy Toluene (BHT) in Polymers of Ethylene and Ethylene-Vinyl Acetate (EVA) Copolymers By Gas Chromatography
*D 4218 – 96(2001)	Determination of Carbon Black Content in Polyethylene Compounds By the Muffle-Furnace Technique
*D 5017 – 96	Determination of Linear Low Density Polyethylene (LLDPE) Composition by Carbon-13 Nuclear Magnetic Resonance
D 5815 – 95(2001) ^{€1}	Determination of Phenolic Antioxidants and Erucamide Slip Additives in Linear Low-Density Polyethylene Using Liquid Chromatography (LC)
*D 1996 – 97	Determination of Phenolic Antioxidants and Erucamide Slip Additives in Low Density Polyethylene Using Liquid Chromatography (LC)
D 6042 – 96	Determination of Phenolic Antioxidants and Erucamide Slip Additives in Polypropylene Homopolymer Formulations Using Liquid Chromatography (LC)
*D 5524 – 94(2001) ^{€1}	Determination of Phenolic Antioxidants in High Density Polyethylene Using Liquid Chromatography
*D 5508 – 94a(2001) ^{€1}	Determination of Residual Acrylonitrile Monomer in Styrene-Acrylonitrile Copolymer Resins and Nitrile-Butadiene Rubber by Headspace-Capillary Gas Chromatography (HS-CGC)
*D 5507 – 99	Determination of Trace Organic Impurities in Monomer Grade Vinyl Chloride by Capillary Column/Multi-Dimensional Gas Chromatography
D 4001 – 93(1999)	Determination of Weight-Average Molecular Weight of Polymers by Light Scattering
D 5594 – 98	Determination of the Vinyl Acetate Content of Ethylene-Vinyl Acetate (EVA) Copolymers by Fourier Transform Infrared Spectroscopy (FT-IR)
*D 4603 – 96	Determining Inherent Viscosity of Poly(Ethylene Terephthalate) (PET)
D 6474 – 99	Determining Molecular Weight Distribution and Molecular Weight Averages of Polyolefins by High Temperature Gel Permeation Chromatography
D 4443 – 95	Determining Residual Vinyl Chloride Monomer Content in PPB Range in Vinyl Chloride Homo- and Co-Polymers by Headspace Gas Chromatography

^{€1}Adopted by American National Standards Institute.

§Approved for use by agencies of the Department of Defense and, if indicated on the standard, replaces corresponding Federal or Military document. Consult the DoD Index of Specifications and Standards for the specific year of issue which has been adopted by the Department of Defense.

‡Adopted by or under consideration for adoption by the Boiler and Pressure Vessel Committee of the American Society of Mechanical Engineers. The ASME Boiler and Pressure Vessel Code Specifications are identical with or based upon these ASTM Specifications.

†Although this standard has been officially withdrawn from Society approval, a brief description is included for information only.

LIST BY SUBJECTS

D 4509 – 96	Determining the 24-Hour Gas (AIR) Space Acetaldehyde Content of Freshly Blown PET Bottles
*D 1601 – 99	Dilute Solution Viscosity of Ethylene Polymers
*D 5227 – 01	Measurement of Hexane Extractable Content of Polyolefins
D 5225 – 98	Measuring Solution Viscosity of Polymers with a Differential Viscometer
D 6645 – 01	Methyl (Comonomer) Content in Polyethylene by Infrared Spectrophotometry
*§D 4019 – 94a	Moisture in Plastics by Coulometric Regeneration of Phosphorus Pentoxide
*D 5296 – 97	Molecular Weight Averages and Molecular Weight Distribution of Polystyrene by High Performance Size-Exclusion Chromatography
*§D 1921 – 01	Particle Size (Sieve Analysis) of Plastic Materials
D 3465 – 00	Purity of Monomeric Plasticizers by Gas Chromatography
*D 4322 – 96(2001) ^{ε1}	Residual Acrylonitrile Monomer Styrene-Acrylonitrile Copolymers and Nitrile Rubber by Headspace Gas Chromatography
*D 3749 – 95	Residual Vinyl Chloride Monomer in Poly(Vinyl Chloride) Homopolymer Resins by Gas Chromatographic Headspace Technique
D 4754 – 98	Two-Sided Liquid Extraction of Plastic Materials Using FDA Migration Cell
D 6248 – 98	Vinyl and Trans Unsaturation in Polyethylene by Infrared Spectrophotometry
D 3124 – 98	Vinylidene Unsaturation in Polyethylene by Infrared Spectrophotometry
<i>Practices for:</i>	
D 5814 – 02	Determination of Contamination in Recycled Poly(Ethylene Terephthalate) (PET) Flakes and Chips Using a Plaque Test
*D 5576 – 00	Determination of Structural Features in Polyolefins and Polyolefin Copolymers by Infrared Spectrophotometry (FT-IR)
*D 4526 – 96(2001) ^{ε1}	Determination of Volatiles in Polymers by Static Headspace Gas Chromatography
D 3591 – 97	Determining Logarithmic Viscosity Number of Poly(Vinyl Chloride) (PVC) in Formulated Compounds
*D 2857 – 95(2001)	Dilute Solution Viscosity of Polymers
D 5226 – 98	Dissolving Polymer Materials
*D 5477 – 02	Identification of Polymer Layers or Inclusions by Fourier Transform Infrared Microspectroscopy (FT-IR)
D 5991 – 96	Separation and Identification of Poly(Vinyl Chloride) (PVC) Contamination in Poly(Ethylene Terephthalate) (PET) Flake
D 6288 – 98	Separation and Washing of Recycled Plastics Prior to Testing
D 6265 – 98	Separation of Contaminants in Polymers Using an Extruder Filter Test
D 3016 – 97	Use of Liquid Exclusion Chromatography Terms and Relationships
<i>Guides for:</i>	
D 5577 – 94	Techniques to Separate and Identify Contaminants in Recycled Plastics
Cellular Materials - Plastics and Elastomers	
<i>Specifications for:</i>	
D 4819 – 96	Flexible Cellular Materials Made From Polyolefin Plastics
§D 1055 – 97	Flexible Cellular Materials—Latex Foam
*D 1056 – 00	Flexible Cellular Materials—Sponge or Expanded Rubber
*§D 3453 – 01	Flexible Cellular Materials—Urethane for Furniture and Automotive Cushioning, Bedding, and Similar Applications
§D 1667 – 97	Flexible Cellular Materials—Vinyl Chloride Polymers and Copolymers (Closed-Cell Foam)
D 6576 – 00	Flexible Cellular Rubber Chemically Blown
*D 3676 – 01	Rubber Cellular Cushion Used for Carpet or Rug Underlay
*D 1786 – 01	Toluene Diisocyanate
D 3851 – 97	Urethane Microcellular Shoe Soling Materials
<i>Test Methods for:</i>	
D 1622 – 98	Apparent Density of Rigid Cellular Plastics
D 3576 – 98	Cell Size of Rigid Cellular Plastics
*D 1621 – 00	Compressive Properties of Rigid Cellular Plastics
*§D 3575 – 00 ^{ε1}	Flexible Cellular Materials Made From Olefin Polymers
D 5672 – 95	Flexible Cellular Materials—Measurement of Indentation Force Deflection Using a 25-mm (1 in.) Deflection Technique
§D 3574 – 01 ^{ε1}	Flexible Cellular Materials—Slab, Bonded, and Molded Urethane Foams
*D 3768 – 96(2000)	Microcellular Urethanes—Flexural Recovery
*D 3769 – 96(2000)	Microcellular Urethanes—High-Temperature Sag
D 6226 – 98 ^{ε1}	Open Cell Content of Rigid Cellular Plastics
*D 2856 – 94(1998)	Open-Cell Content of Rigid Cellular Plastics by the Air Pycnometer
*D 5523 – 94(1999) ^{ε1}	Polyurethane Raw Materials: Acidity by Argentometric Determination of Hydrolyzable Chlorine in Monomeric, Aromatic Isocyanates

LIST BY SUBJECTS

D 6437 – 99	Polyurethane Raw Materials: Alkalinity in Low-Alkalinity Polyols (Determination of CPR Values of Polyols)
D 4877 – 98	Polyurethane Raw Materials: Determination of APHA Color in Isocyanates
D 4662 – 98	Polyurethane Raw Materials: Determination of Acid and Alkalinity Numbers of Polyols
D 6099 – 97	Polyurethane Raw Materials: Determination of Acidity in Moderate to High Acidity Aromatic Isocyanates
D 4876 – 98	Polyurethane Raw Materials: Determination of Acidity of Crude or Modified Isocyanates
D 4890 – 98	Polyurethane Raw Materials: Determination of Gardner and APHA Color of Polyols
D 4663 – 98	Polyurethane Raw Materials: Determination of Hydrolyzable Chlorine of Isocyanates
*D 4274 – 99	Polyurethane Raw Materials: Determination of Hydroxyl Numbers of Polyols
D 4273 – 99	Polyurethane Raw Materials: Determination of Primary Hydroxyl Content of Polyether Polyols
D 4659 – 98	Polyurethane Raw Materials: Determination of Specific Gravity of Isocyanates
D 4669 – 98	Polyurethane Raw Materials: Determination of Specific Gravity of Polyols
*D 4670 – 97	Polyurethane Raw Materials: Determination of Suspended Matter In Polyols
D 4661 – 98	Polyurethane Raw Materials: Determination of Total Chlorine in Isocyanates
*D 4671 – 99	Polyurethane Raw Materials: Determination of Unsaturation of Polyols
D 4889 – 98	Polyurethane Raw Materials: Determination of Viscosity of Crude or Modified Isocyanates
D 4878 – 98	Polyurethane Raw Materials: Determination of Viscosity of Polyols
*D 4672 – 00	Polyurethane Raw Materials: Determination of Water Content of Polyols
*D 5155 – 01	Polyurethane Raw Materials: Determination of the Isocyanate Content of Aromatic Isocyanates
*D 4660 – 00	Polyurethane Raw Materials: Determination of the Isomer Content of Toluenediisocyanate
*D 4875 – 99	Polyurethane Raw Materials: Determination of the Polymerized Ethylene Oxide Content of Polyether Polyols
*D 5629 – 99	Polyurethane Raw Materials
*D 2126 – 99	Response of Rigid Cellular Plastics to Thermal and Humid Aging
*D 3489 – 96(2000)	Rubber—Microcellular Urethane
*§D 1623 – 78(1995)	Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics
*§D 2842 – 01	Water Absorption of Rigid Cellular Plastics

Practices for:

D 3748 – 98	Evaluating High-Density Rigid Cellular Thermoplastics
D 6342 – 98	Polyurethane Raw Materials: Determining Hydroxyl Number of Polyols by Near Infrared (NIR) Spectroscopy
*D 2841	Sampling Hollow Microspheres (Discontinued 1999†)

Durability of Plastics

Test Methods for:

*D 4674 – 89(1997)	Accelerated Testing for Color Stability of Plastics Exposed to Indoor Fluorescent Lighting and Window-Filtered Daylight
D 1042 – 01a	Linear Dimensional Changes of Plastics Under Accelerated Service Conditions
D 570 – 98	Water Absorption of Plastics

Practices for:

*D 618 – 00	Conditioning Plastics for Testing
D 6360 – 99	Enclosed Carbon-Arc Exposures of Plastics
*§D 543 – 95(2001)	Evaluating the Resistance of Plastics to Chemical Reagents
D 1499 – 99	Filtered Open-Flame Carbon-Arc Exposures of Plastics
D 4329 – 99	Fluorescent UV Exposure of Plastics
§D 3045 – 92(1997)	Heat Aging of Plastics Without Load
*§D 1435 – 99	Outdoor Weathering of Plastics
*D 4364 – 94	Performing Accelerated Outdoor Weathering of Plastics Using Concentrated Natural Sunlight
*D 1712 – 96	Resistance of Plastics to Sulfide Staining
D 4459 – 99	Xenon-Arc Exposure of Plastics Intended for Indoor Applications
D 2565 – 99	Xenon-Arc Exposure of Plastics Intended for Outdoor Applications

Environmentally Degradable Plastics

Specifications for:

D 6400 – 99 ^{e1}	Compostable Plastics
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Test Methods for:

D 5988 – 96	Determining Aerobic Biodegradation in Soil of Plastic Materials or Residual Plastic Materials After Composting
D 5338 – 98 ^{e1}	Determining Aerobic Biodegradation of Plastic Materials Under Controlled Composting Conditions
D 6691 – 01	Determining Aerobic Biodegradation of Plastic Materials in the Marine Environment by a Defined Microbial Consortium

LIST BY SUBJECTS

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|----------------------------------|---|
| D 6340 – 98 | Determining Aerobic Biodegradation of Radiolabeled Plastic Materials in an Aqueous or Compost Environment |
| D 6776 – 02 | Determining Anaerobic Biodegradability of Radiolabeled Plastic Materials in a Laboratory-Scale Simulated Landfill Environment |
| *D 5526 – 94(2002) | Determining Anaerobic Biodegradation of Plastic Materials Under Accelerated Landfill Conditions |
| *D 5511 – 94 | Determining Anaerobic Biodegradation of Plastic Materials Under High-Solids Anaerobic-Digestion Conditions |
| D 6003 – 96 | Determining Weight Loss From Plastic Materials Exposed to Simulated Municipal Solid-Waste (MSW) Aerobic Compost Environment |
| *D 5247 – 92 | Determining the Aerobic Biodegradability of Degradable Plastics by Specific Microorganisms |
| *D 5271 – 02 | Determining the Aerobic Biodegradation of Plastic Materials in an Activated-Sludge-Wastewater-Treatment System |
| *D 5209 – 92 | Determining the Aerobic Biodegradation of Plastic Materials in the Presence of Municipal Sewer Sludge |
| D 5210 – 92(2000) | Determining the Anaerobic Biodegradation of Plastic Materials in the Presence of Municipal Sewage Sludge |
| D 6692 – 01 | Determining the Biodegradability of Radiolabeled Polymeric Plastic Materials in Seawater |
| <i>Practices for:</i> | |
| D 3826 – 98 | Determining Degradation End Point in Degradable Polyethylene and Polypropylene Using a Tensile Test |
| *D 5512 – 96 | Exposing Plastics to a Simulated Compost Environment Using an Externally Heated Reactor |
| *D 5509 – 96 | Exposing Plastics to a Simulated Compost Environment |
| *D 5525 – 94a | Exposing Plastics to a Simulated Landfill Environment |
| *D 5071 – 99 | Exposure of Photodegradable Plastics in a Xenon Arc Apparatus |
| D 5208 – 01 | Fluorescent Ultraviolet (UV) Exposure of Photodegradable Plastics |
| *D 5510 – 94(2001) | Heat Aging of Oxidatively Degradable Plastics |
| *D 5272 – 92(1999) | Outdoor Exposure Testing of Photodegradable Plastics |
| D 5951 – 96(2002) | Preparing Residual Solids Obtained After Biodegradability Standard Methods for Plastics in Solid Waste for Toxicity and Compost Quality Testing |
| *D 5437 | Weathering of Plastics Under Marine Floating Exposure (Discontinued 1999†) |
| <i>Guides for:</i> | |
| D 6002 – 96(2002) ^{€1} | Assessing the Compostability of Environmentally Degradable Plastics |
| Executive | |
| <i>Guides for:</i> | |
| *D 4968 – 00 | Annual Review of Test Methods and Specifications for Plastics |
| Film and Sheeting | |
| <i>Specifications for:</i> | |
| *D 3981 – 95 | Medium-Density Polyethylene Films for General Use and Packaging Applications |
| *D 1593 – 99 | Nonrigid Vinyl Chloride Plastic Sheeting |
| *D 2673 – 99 | Oriented Polypropylene Film |
| *§D 2103 – 97 | Polyethylene Film and Sheeting |
| *D 4635 – 01 | Polyethylene Films Made from Low-Density Polyethylene for General Use and Packaging Applications |
| *D 4397 – 00 | Polyethylene Sheeting for Construction, Industrial, and Agricultural Applications |
| *D 4801 – 95(2001) ^{€1} | Polyethylene Sheeting in Thickness of 0.25 mm (0.010 in.) and Greater |
| D 5047 – 95 | Polyethylene Terephthalate Film and Sheeting |
| *§D 4225 – 97 | Styrene-Butadiene Sheeting |
| <i>Test Methods for:</i> | |
| *D 3354 – 96 | Blocking Load of Plastic Film by the Parallel Plate Method |
| *D 5946 – 01 | Corona-Treated Polymer Films Using Water Contact Angle Measurements |
| *D 3420 – 95 | Dynamic Ball Burst (Pendulum) Impact Resistance of Plastic Film |
| *D 3351 | Gel Count of Plastic Film (Discontinued 2000†) |
| *§D 1709 – 01 | Impact Resistance of Plastic Film by the Free-Falling Dart Method |
| §D 1204 – 94 ^{€1} | Linear Dimensional Changes of Nonrigid Thermoplastic Sheeting or Film at Elevated Temperature |
| *D 4321 – 99 | Package Yield of Plastic Film |
| *D 1922 – 00a | Propagation Tear Resistance of Plastic Film and Thin Sheeting by Pendulum Method |
| *D 2582 – 00 | Puncture-Propagation Tear Resistance of Plastic Film and Thin Sheeting |
| *D 2923 – 01 | Rigidity of Polyolefin Film and Sheeting |
| D 2838 – 95 | Shrink Tension and Orientation Release Stress of Plastic Film and Thin Sheeting |

LIST BY SUBJECTS

*D 1938 – 02	Tear-Propagation Resistance (Trouser Tear) of Plastic Film and Thin Sheeting by a Single-Tear Method
*D 4272 – 99	Total Energy Impact of Plastic Films By Dart Drop
§D 2732 – 96	Unrestrained Linear Thermal Shrinkage of Plastic Film and Sheeting
*D 2578 – 99a	Wetting Tension of Polyethylene and Polypropylene Films

Practices for:

D 6287 – 98	Cutting Film and Sheeting Test Specimens
*D 4204 – 00	Preparing Plastic Film Specimens for a Round-Robin Study

Government/Industry Standardization

Classifications:

*§D 4000 – 01a ^{e1}	Specifying Plastic Materials
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Practices for:

§D 3892 – 93(1998)	Packaging/Packing of Plastics
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Guides for:

D 6436 – 99	Reporting Properties for Plastics and Thermoplastic Elastomers
*D 1999	Selection of Specimens and Test Parameters from ISO/IEC Standards (Discontinued 2000†)
*D 5740 – 97	Writing Material Standards in the D4000 Format

Mechanical Properties

Test Methods for:

*D 747 – 99	Apparent Bending Modulus of Plastics by Means of a Cantilever Beam
*§D 953 – 95	Bearing Strength of Plastics
D 952 – 95	Bond or Cohesive Strength of Sheet Plastics and Electrical Insulating Materials
D 4508 – 98	Chip Impact Strength of Plastics
*§D 695 – 96	Compressive Properties of Rigid Plastics
D 5934 – 96	Determination of Modulus of Elasticity for Rigid and Semi-Rigid Plastic Specimens by Controlled Rate of Loading Using Three-Point Bending
D 6068 – 96	Determining J-R Curves of Plastic Materials
D 6110 – 97	Determining the Charpy Impact Resistance of Notched Specimens of Plastics
*D 256 – 00 ^{e1}	Determining the Izod Pendulum Impact Resistance of Plastics
*D 5419 – 95	Environmental Stress Crack Resistance (ESCR) of Threaded Plastic Closures
D 6395 – 99	Flatwise Flexural Impact Resistance of Rigid Plastics
*§D 671 – 93	Flexural Fatigue of Plastics by Constant-Amplitude-of-Force
*D 6272 – 00	Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials by Four-Point Bending
*D 790 – 00	Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials
*D 3763 – 00	High Speed Puncture Properties of Plastics Using Load and Displacement Sensors
D 5420 – 98a	Impact Resistance of Flat, Rigid Plastic Specimen by Means of a Striker Impacted by a Falling Weight (Gardner Impact)
*D 5628 – 96(2001) ^{e1}	Impact Resistance of Flat, Rigid Plastic Specimens by Means of a Falling Dart (Tup or Falling Mass)
*§D 2583 – 95(2001) ^{e1}	Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor
*§D 1004 – 94a	Initial Tear Resistance of Plastic Film and Sheeting
*D 3028	Kinetic Coefficient of Friction of Plastic Solids (Discontinued 2000†)
*D 4093 – 95(2001) ^{e1}	Photoelastic Measurements of Birefringence and Residual Strains in Transparent or Translucent Plastic Materials
*D 5947 – 01 ^{e1}	Physical Dimensions of Solid Plastics Specimens
*D 5045 – 99	Plane-Strain Fracture Toughness and Strain Energy Release Rate of Plastic Materials
*D 4440 – 01	Plastics: Dynamic Mechanical Properties Melt Rheology
*§D 4473 – 01	Plastics: Dynamic Mechanical Properties: Cure Behavior
*D 5024 – 01	Plastics: Dynamic Mechanical Properties: In Compression
*D 5418 – 01	Plastics: Dynamic Mechanical Properties: In Flexure (Dual Cantilever Beam)
*D 5023 – 01	Plastics: Dynamic Mechanical Properties: In Flexure (Three-Point Bending)
*D 5026 – 01	Plastics: Dynamic Mechanical Properties: In Tension
*D 5279 – 01	Plastics: Dynamic Mechanical Properties: In Torsion
*§D 1242 – 95a	Resistance of Plastic Materials to Abrasion
§D 1044 – 99	Resistance of Transparent Plastics to Surface Abrasion
*D 785 – 98 ^{e1}	Rockwell Hardness of Plastics and Electrical Insulating Materials
§D 732 – 99	Shear Strength of Plastics by Punch Tool
*§D 1894 – 01	Static and Kinetic Coefficients of Friction of Plastic Film and Sheeting
*D 1043 – 99	Stiffness Properties of Plastics as a Function of Temperature by Means of a Torsion Test
§D 1708 – 96	Tensile Properties of Plastics By Use of Microtensile Specimens

LIST BY SUBJECTS

*§D 638 – 01	Tensile Properties of Plastics
*D 5083 – 96	Tensile Properties of Reinforced Thermosetting Plastics Using Straight-Sided Specimens
*§D 882 – 01	Tensile Properties of Thin Plastic Sheet
*§D 2990 – 01	Tensile, Compressive, and Flexural Creep and Creep-Rupture of Plastics
D 1822 – 99	Tensile-Impact Energy to Break Plastics and Electrical Insulating Materials
*D 4812 – 99	Unnotched Cantilever Beam Impact Strength of Plastics

Practices for:

D 5870 – 95	Calculating Property Retention Index of Plastics
*§D 4065 – 01	Plastics: Dynamic Mechanical Properties: Determination and Report of Procedures

Guides for:

*D 5592 – 94	Material Properties Needed in Engineering Design Using Plastics
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Terminology for:

*§D 4092 – 01	Plastics: Dynamic Mechanical Properties
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Optical Properties

Test Methods for:

D 6290 – 98 ^{e1}	Color Determination of Plastic Pellets
*D 1003 – 00	Haze and Luminous Transmittance of Transparent Plastics
*D 542 – 00	Index of Refraction of Transparent Organic Plastics
*§D 2457 – 97	Specular Gloss of Plastic Films and Solid Plastics
*§D 1746 – 97	Transparency of Plastic Sheet

Practices for:

*D 3015	Microscopical Examination of Pigment Dispersion in Plastic Compounds(Discontinued 2001†)
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Plastic Products

Specifications for:

*D 2911 – 94(2001)	Dimensions and Tolerances for Plastic Bottles
D 6263 – 98	Extruded Rods and Bars Made From Rigid Poly(Vinyl Chloride) (PVC) and Chlorinated Poly(Vinyl Chloride) (CPVC)
D 6261 – 98	Extruded and Compression Molded Basic Shapes Made from Thermoplastic Polyester (TPES)
D 6457 – 99 ^{e1}	Extruded and Compression Molded Rod and Heavy-Walled Tubing Made from Polytetrafluoroethylene (PTFE)
D 6713 – 01	Extruded and Compression Molded Shapes Made from Poly(Vinylidene Fluoride) (PVDF)
D 6098 – 97	Extruded and Compression Molded Shapes Made from Polycarbonate (PC)
*D 5989 – 98	Extruded and Monomer Cast Shapes Made from Nylon (PA)
D 6100 – 97	Extruded, Compression Molded and Injection Molded Acetal Shapes (POM)
D 6262 – 98	Extruded, Compression Molded, and Injection Molded Basic Shapes of Poly(aryl ether ketone) (PAEK)
D 6456 – 99	Finished Parts Made from Polyimide Resin
D 5998 – 96	Molded Polyethylene Shipping and Storage Drums
D 6662 – 01	Polyolefin-Based Plastic Lumber Decking Boards
P S106 – 01	Rods and Tubes of Polyethylene (PE)
D 6712 – 01	Ultra-High-Molecular-Weight Polyethylene (UHMW-PE) Solid Plastic Shapes

Test Methods for:

D 6111 – 97	Bulk Density And Specific Gravity of Plastic Lumber and Shapes by Displacement
*D 2659 – 95(2001)	Column Crush Properties of Blown Thermoplastic Containers
D 6108 – 97	Compressive Properties of Plastic Lumber and Shapes
D 6112 – 97	Compressive and Flexural Creep and Creep-Rupture of Plastic Lumber and Shapes
D 6341 – 98	Determination of the Linear Coefficient of Thermal Expansion of Plastic Lumber and Plastic Lumber Shapes Between –30 and 140°F (–34.4 and 60°C)
*D 2463 – 95(2001)	Drop Impact Resistance of Blow-Molded Thermoplastic Containers
*D 2561 – 95(2001)	Environmental Stress-Crack Resistance of Blow-Molded Polyethylene Containers
D 6109 – 97 ^{e1}	Flexural Properties of Unreinforced and Reinforced Plastic Lumber
D 6117 – 97	Mechanical Fasteners in Plastic Lumber and Shapes
*D 2684 – 95(2001)	Permeability of Thermoplastic Containers to Packaged Reagents or Proprietary Products
D 6435 – 99	Shear Properties of Plastic Lumber and Plastic Lumber Shapes
*D 2741 – 95(2001)	Susceptibility of Polyethylene Bottles to Soot Accumulation

Recycled Plastics

Practices for:

*D 1972 – 97(2001)	Generic Marking of Plastic Products
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Guides for: