

Leading

Performance Solutions

Manage Risk

Save Time and Money

Grow Business

Responsive Leadership

As a construction professional, you face countless challenges. Every day you are expected to finish projects efficiently and effectively, without compromising quality. It's a tall order. USG can help.

Our total building solutions approach focuses on these key issues:

Manage Risk

Providing comprehensively tested and evaluated products and systems to meet and exceed project specifications.

Save Time and Money

Delivering products and systems that maximize production and minimize callbacks.

Grow Business

Sharing expert product and system knowledge, application expertise, and innovative solutions to build revenue and expand opportunities.

Responsive Leadership

Building on a century of knowledge and experience with the construction industry through continuing education and training, technical assistance and research.

Extensive Product Line

USG offers the industry's most comprehensive product line
for ceilings, substrates and drywall systems.

SHEETROCK® Brand Products

Includes gypsum panels, joint treatment, paper faced metal bead and trim, and ceiling panels. SHEETROCK Brand Gypsum Panels and Interior Finishing Systems provide consistent quality and easy installation. Use the full product line together to achieve beautiful durable walls and ceilings in less time with fewer callbacks.

DUROCK® Brand Cement Board

A high-strength tile backer board that delivers a water-durable tile base for walls, floors, ceilings and countertops—anywhere tile is used. The board will not swell, soften, delaminate or disintegrate. It is also noncombustible and carries a 30-year limited warranty.

FIBEROCK® Brand Panels

Manufactured from a unique combination of gypsum and cellulose that provides superior strength. FIBEROCK Brand products that incorporate USG's patented AQUA-TOUGH™ formulation also offer integral water resistance. Full product offering includes abuse-resistant panels for situations where enhanced resistance to abrasion, indentation, and penetration are required; sheathing for use in most exterior systems; and underlayment for use under virtually all flooring materials and in all conditions.

USG CEILINGS™

Acoustical panels and specialty ceiling systems combine award-winning design, versatility, and unmatched durability with easy installation. USG Ceilings panels complement USG's DOWN® Brand Suspension Systems to form the fastest-installing ceiling systems in the industry.

Resources

800 USG.4YOU

Expert advice for any project-related conditions.

USG Gypsum Construction Handbook

Industry's best resource for good construction practices.

usg.com

Provides the most current product and system information, building solutions and online tools.

Fire Performance Resistance Solutions



Fire resistance refers to the ability of an assembly to serve as a barrier to fire and to confine its spread from the originating area. Spread of fire from one area to another occurs due to the following conditions:

- collapse of the barrier
- openings in the barrier allow passage of flame or hot gases
- sufficient heat is conducted through an assembly to exceed specified temperature limitations

Performance Requirements

Select ASTM E-119 fire-tested assemblies to comply with regulatory requirements, and construct the assembly according to specifications. If an assembly does not comply, the building inspector may stop work or reject the job after completion.

Fire-Resistance Testing

A fire-resistance test rating denotes the length of time a given assembly can withstand fire and give protection from it under precisely controlled laboratory conditions. All tests are conducted in accordance with ASTM E119: Standard Test Methods for Fire Tests of Building Construction and Materials. The standard is also known as ANSI/UL 263 and NFPA 251. Fire resistance ratings are expressed in hours and apply to walls, floor-, roof-ceiling assemblies, beams, and columns.

Design Substitutions and Additional Materials

For assemblies tested at Underwriters Laboratories Inc. (UL), ratings are specific to the designs tested. This is of particular importance when faced with alternate product or construction suggestions. For example, insulation may not be added to floor- or roof-ceiling assemblies, unless described in the UL design. Addition of insulation in the concealed space between the ceiling membrane and the floor or roof structure may reduce the hourly rating of an assembly by causing premature disruption of the ceiling membrane and/or higher temperatures on structural components under fire exposure conditions.

Resources

USG Construction Selector (SA100)

Provides fire-tested performance for a variety of assemblies.

USG Firestop Systems (SA727)

Features firestopping products and systems, test data and specification information.

Underwriters Laboratories, Inc. Fire Resistance Directory, Volume One

Contains all Listings and Classifications for product categories covered.

USG Ceiling Systems (SC2000)

Desktop resource for acoustical ceiling panels, suspension systems and specialty ceiling systems.

Sound Performance Control Solutions



Sound control refers to the ability to attenuate or absorb sound passing through a partition or ceiling assembly. Performance ratings for sound control allow construction of wall and ceiling assemblies that minimize sounds such as speech, music, mechanical equipment or other sounds. Proper sound control techniques are a critical component of effective living or working spaces.

Performance Requirements

Performance depends on building design and careful attention to detailing and workmanship. Penetrations, perimeter leaks, and other faulty design or installation practices can compromise an assembly.

Sound Testing

Sound control test ratings provide a comparison of sound in a space. For example, in an open plan space, speech privacy is a major consideration. Partitions with a high STC (Sound Transmission Class) can be used to minimize transmission of undesired sound space to space. Ceiling systems with a high NRC (Noise Reduction Coefficient) can be used to absorb and minimize undesired sound within a space. If the acoustical objective is to attenuate or contain sound, ceiling panels with a high CAC (Ceiling Attenuation Class) are ideal. Sound tests are conducted under ideal laboratory conditions per ASTM procedures. Use sound test data to compare and select materials and constructions.

Design Substitutions

USG products are assembled in a specific manner to meet the requirements of these ASTM procedures. Substitution of materials other than those tested or deviation from the specified construction may negatively affect performance.

Resources

USG Construction Selector (SA100)

Provides tested acoustical performance for various assemblies.

USG Ceiling Systems (SC2000)

Desktop resource for acoustical ceiling panels, suspension systems, and specialty ceiling systems.

USG Gypsum Construction Handbook

Industry's best resource for good construction practices.

Moisture Performance Control Solutions



Understanding moisture control and its impact on the construction process and building materials is integral to good design and construction practices. The best way to address moisture control is to ensure that building materials do not get wet before and during installation, and are not exposed to moisture inside the finished building. In all situations, immediately identify and address the cause of water damage to prevent re-occurrence of the problem.

Performance Requirements

The key to minimizing moisture damage is controlling moisture, which must include consideration of the building design, construction and maintenance practices. Select products and systems that offer appropriate resistance to water and high-moisture conditions for your application. Remember, products alone cannot control moisture or prevent moisture-related problems such as mold.

Moisture, Mold and Mildew Testing

Testing provides a basis of comparative performance results. This does not mean that the test will accurately represent the moisture performance of building materials in actual end use. USG uses a variety of ASTM and other test methods to evaluate wet performance. These tests evaluate characteristics such as water absorption, tile bond, and mold and mildew resistance. USG is actively working with experts to develop and enhance test protocols so that they accurately represent specific product and system performance.

Resources

USG Literature

Moisture, Mold, Mildew and Construction Practices, Repairing Water Damaged Building Systems (WB2315)

ASTM D3273-00, Frequently Asked Questions (WB2324)

Moisture, Mold, Mildew and Construction Practices, Frequently Asked Questions (WB2317)

Moisture Control (WB2325)

USG Ceiling Systems (SC2000)

Facts about Moisture, Mold, Mildew and Ceiling Panels (SC2414)

Industry Web Sites

U.S. Environmental Protection Agency - www.epa.gov/iaq

New York City Department of Health - <http://nyc.gov/html/doh/home.html>

Gypsum Association - www.gypsum.org

Abuse Performance Resistance Solutions



Durability is one of the basic design considerations in all buildings. Designers and their clients have realized that it is often less expensive from a life-cycle perspective to address abuse resistance in critical areas in the initial project stage than to pay the high on-going costs of maintaining and repairing regular partitions and ceiling systems.

Performance Requirements

Building design must consider the kinds of conditions that will exist and the resulting stresses and movements. Abuse resistance may be defined as the ability of a system to resist three levels of damage:

- Surface or edge damage from abrasion and/or indentation
- Penetration through to the wall cavity or ceiling from sharp or blunt impact
- Security breach through the entire assembly from ballistics or forced entry

Abuse-Resistance Testing

Tests for abuse resistance provide comparative performance results versus alternative methods of construction. This comparison allows you to evaluate appropriate systems for your application. USG uses a variety of ASTM and other test methods to evaluate abuse resistance. This gives you measures of abuse resistance based on surface damage from abrasion or indentation; penetration (hard-body or soft-body resistance); and security (forced entry or ballistic resistance) evaluated by the U.S. Department of State.

Resources

USG Abuse-Resistant Systems (SA929)

Provides overview of abuse-resistance testing methods, categories, products, assemblies, and design.

USG Gypsum Construction Handbook

Industry's best resource for good construction practices.

USG Ceiling Systems (SC2000)

Desktop resource for acoustical ceiling panels, suspension systems and specialty ceiling systems.

Aesthetics

Performance Solutions



A building's aesthetics must strike a balance between form and function. Influencing the aesthetics are the building's end use (retail, entertainment, education, etc.) and its environment. Together, contractors and architects work to achieve building solutions that meet design expectations.

Performance Requirements

Determine the appropriate products and systems for the finished appearance of your interior construction project, considering options such as textured or smooth finishes; drywall or plaster systems; and a variety of ceiling system choices.

Levels of Finish

Achieving top-quality finishing results under a wide range of circumstances demands proper installation and application techniques. For critical lighting areas, start your research with the Gypsum Association's publication GA-214, Recommended Levels of Gypsum Board Finish or ASTM C-840 for a detailed description of levels of finish.

Resources

The SOLUTIONS CENTERSM

Located in Chicago, this hands-on learning center serves as a leading resource center for the construction industry. At the SOLUTIONS CENTER, professionals can learn about and utilize the most current ceiling, wall, and underlayment product and system advances.

Case Studies ([usg.com](#))

Learn about specific solutions achieved with USG products by architects and contractors across the continent.

SHEETROCK[®] Brand Interior Finishing Systems Catalog (J1424)

Includes the complete line of top-quality interior finishing products including joint compounds and tapes, and paper faced metal bead and trims.

USG Ceiling Systems (SC2000)

Desktop resource for acoustical ceiling panels, suspension systems, and specialty ceiling systems.

Design Wizard ([usg.com](#))

Generate, present, and specify multiple design scenarios using USG ceiling systems.

Domes and Vaults Estimator ([usg.com](#))

Generate drawings, bill of materials, and step-by-step illustrated installation instructions.

TOPO[™] and GEOMETRIX[™] Design Tools ([usg.com](#))

Generate, present, and specify multiple three-dimensional specialty ceiling systems.

Performance Factors

USG high quality products and systems are designed

to manage the major performance factors.

To prioritize your project needs, use the following icons and their corresponding explanations to identify critical system performance factors.

Fire Resistance



Sound Control



Moisture Control



Abuse Resistance



Aesthetics



Technical Service
800 USG.4YOU

Web Site
www.usg.com

Samples/Literature
888 874.2450

Samples/Literature E-mail
samplit@usg.com

Samples/Literature/Fax
888 874.2348

Customer Service
800 950.3839

Trademarks

The following trademarks used herein are owned by United States Gypsum or a related company: AQUA-TOUGH, DONN, DUROCK, FIBEROCK, GEOMETRIX, SHEETROCK, TOPO, USG.

Notice

We shall not be liable for incidental or consequential damages, directly or indirectly sustained, nor for any loss caused by application of these goods not in accordance with current printed instructions or for other than the intended use. Our liability is expressly limited to replacement of defective goods. Any claim shall be deemed waived unless made in writing to us within thirty (30) days from the date it was or reasonably should have been discovered.

Note

All products described here may not be available in all geographic markets. Consult your local sales office or representative for more information.

Safety First!

Follow good safety and industrial hygiene practices during handling and installing all products and systems. Take necessary precautions and wear the appropriate personal protective equipment as needed. Read material safety data sheets and related literature on products before specification and/or installation.

