



# USG: America's Building Industry Leader

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## About USG Corporation

Chicago-based USG has a long history of leadership in producing innovative building construction products. Since its founding in 1902, USG's focus has been on quality and innovation in the development of gypsum plasters and cements for the construction industry. The company revolutionized the industry in the early 1930s with the introduction of ROCKLATH gypsum lath, a paperbound gypsum board that replaced wood and metal lath as a base material for conventional plaster. As USG perfected systems to join panels together, it introduced the SHEETROCK® brand drywall systems that have gone on to become an authority in the worldwide building industry.

Innovation at USG continues to this day. In the past 30 years, the company has pioneered major advances in DUROCK brand cement board construction, lightweight SHEETROCK brand joint compounds, high-performance sound-control assemblies, fire-rated systems, high-strength veneer plasters and drywall surface preparations.

Recent innovations have been in the area of FIBEROCK brand abuse-resistant and SHEETROCK brand MOLD TOUGH gypsum panels, SECUROCK Glass-Mat exterior sheatings and plaster products. Additionally, in 2006, USG became the first manufacturer to offer formaldehyde-free ceiling panels with the highest-level of antimicrobial protection. These new ceiling products are also characterized by high mold and mildew resistance and low VOC (volatile organic compounds) emissions.

USG products are used across the full range of construction projects, from major commercial developments, to residential housing projects, to simple home improvements. USG's flagship brands, including SHEETROCK brand gypsum panels and finishing products, CLIMAPLUS ceiling panels, and DUROCK brand cement board, are recognized worldwide for their quality, performance and cost-effectiveness.

With facilities in more than 30 countries, USG, a multi-billion-dollar Fortune 500 company, is one of the world's leading producers of gypsum wallboard, joint compound and related products, and acoustical ceiling panels, suspension systems, and specialty ceiling systems. USG distributes its products across North America, Europe, the Middle East, Africa, Latin America, the Caribbean and the Pacific Rim—through local, regional and national wholesalers and building-materials suppliers.

The USG family of products is focused on creative building solutions that set new standards for productivity and efficiency, helping contractors and architects deliver quality building projects and innovative designs. USG's core values include:

**Safety** We adhere to the highest standards for effective accident prevention and safe operating practices to prevent injuries.

**Integrity** We maintain the highest standards of behavior by being honest and ethical in our conduct.

**Service** We anticipate customer needs and are the most responsive, dependable and easiest company to do business with.

**Innovation** We strive to develop creative customer-desired products and services.

**Diversity** We are committed to promoting diversity of thought, ideas, perspectives and people.

**Efficiency** We streamline end-to-end processes across business lines, customers and suppliers.

**Quality** We maintain the highest operational standards in the industry.

USG is also fully committed to responsible environmental management. In fact, it has been corporate policy for over 100 years to manage natural resources effectively. The company continuously seeks ways to minimize use of natural materials and substitute them with repurposed materials. (See Chapter 16, "Sustainability," for specific information on sustainability at USG.)

## USG Building Materials

USG offers a wide variety of quality products and integrated, performance-engineered systems. Our building systems are designed to consider all major factors: cost, sound control, moisture resistance, abuse resistance, fire resistance, structural capacity, aesthetics, sustainability, and overall utility and function.

### Current USG Building Systems and Component Products

System Applications	Product Examples
Tile and Flooring	<ul style="list-style-type: none"> <li>• Cement Board</li> <li>• Fiber Board</li> <li>• Tile Membrane</li> <li>• Floor Patch</li> <li>• Floor Primer/Sealer</li> <li>• Mortars and Mastics</li> <li>• Poured Self-leveling Floor Underlayment</li> </ul>
Interior Panels and Finishes	<p><b>Gypsum-Based</b></p> <ul style="list-style-type: none"> <li>• Gypsum Board</li> <li>• Mold-Resistant Gypsum Board</li> <li>• MH Gypsum Board</li> <li>• Abuse-Resistant Fiber Board</li> <li>• Joint Compound</li> <li>• Drywall Tape</li> <li>• Corner Bead</li> <li>• Tools</li> <li>• Primers</li> </ul>

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### Current USG Building Systems and Component Products (cont.)

	<b>Plasters</b> <ul style="list-style-type: none"> <li>• Plaster Base Board</li> <li>• Veneer Plaster</li> <li>• Tools</li> </ul>
<b>Exteriors</b>	<ul style="list-style-type: none"> <li>• Exterior Wall Panels</li> <li>• Roofing Panels</li> </ul>
<b>Structural</b>	<ul style="list-style-type: none"> <li>• Structural Panels</li> </ul>
<b>Ceilings</b>	<ul style="list-style-type: none"> <li>• Tile</li> <li>• Grid</li> <li>• Specialty</li> <li>• Drywall Suspension</li> </ul>

### New USG Products

Since the *USG Handbook Centennial Edition* was published in 2001, the company has introduced new products:

- **SHEETROCK** brand gypsum panels, **MOLD TOUGH**—A non-combustible, moisture- and mold-resistant paper-faced gypsum core (drywall) panel that addressed the rising concerns regarding mold and indoor air quality.
- **SECUROCK** brand glass-mat sheathing—A non-combustible, moisture- and mold-resistant panel designed for use under exterior claddings where conventional gypsum sheathing products had been used.

### The Manufacture of Gypsum Products

All gypsum products are manufactured from a mineral rock (gypsum) that is gray to white in color and is found in abundant deposits around the world. Basic gypsum consists of calcium sulfate chemically combined with water of crystallization ( $\text{CaSO}_4 + 2\text{H}_2\text{O}$ ). The combined water makes up about 20% of gypsum rock's weight (50% by volume) and gives the material its characteristic fire-resistive qualities and high adaptability to varied construction use.

After gypsum rock is mined or quarried, it is crushed, dried, and ground to a flour-like consistency. It is then calcined (heated) to remove most of its chemically combined water. The resulting material, commonly known as "plaster of Paris," is mixed with water and other ingredients and sandwiched between two sheets of specially manufactured paper to form various types of gypsum board. The powdery, calcined material may also be formulated and packaged for use as gypsum plaster or cement.

Gypsum manufacturers began incorporating recycled paper facings into gypsum board more than 50 years ago, while synthetic gypsum was first integrated into the core of gypsum board almost a quarter of a century ago. It is this constant desire to improve the basic gypsum product line that has driven the gypsum manufacturing industry to be a leader in the production of environmentally conscious building materials. Mined gypsum has been the traditional raw material used for drywall and plaster products. In the past few decades, however, more and more "synthetic" or "recaptured" gypsum has been used in the manufacturing process. Advanced processes, many developed by USG, enable the conversion of certain industrial waste products to form this synthetic gypsum.

For example, many of our nation's power plants burn coal, which emits sulfur dioxide and other pollutants. The technology used to capture and treat these harmful emissions—called "flue gas desulfurization" (FGD)—creates a residual product that can be purified and processed to form high-performance synthetic gypsum. This material delivers all the durability, fire resistance, low cost and ease of installation of naturally occurring gypsum rock.

Gypsum boards are produced using a highly automated, continuous process. After the paper-sandwiched gypsum core has set, the boards are cut to length, dried, prefinished as required, and packaged for shipment. Rigorous quality-control measures are applied throughout the manufacturing process.

Cement board products have some of the same characteristics as gypsum board, with the added advantage of moisture resistance. At USG, they are formed in a continuous process using aggregated Portland cement slurry, with polymer-coated, glass-fiber mesh completely wrapping the edges and front and back surfaces. Cement board is most typically used as a substrate beneath ceramic tile on walls and floors. A wide variety of board sizes are available for floor, wall, ceiling and countertop installations.

The ongoing advancement of gypsum construction products depends on maintaining quality, while reducing construction time and cost. This is the focus of specialists at the USG Research and Technology Innovation Center.

## Products for Manufactured Housing and Industrialized Construction

USG provides a wide assortment of products specifically designed for use in manufactured housing and industrialized applications. Examples include gypsum board, joint treatments, metal beads and trims, special sealants, primers, cement board and texture products, all distributed under the SHEETROCK MH brand.

### Industrial Products

**LEVELROCK Brand Floor Underlayment** Poured gypsum floor underlayment systems provide an economical way to achieve lightweight, fire-resistant, sound-rated, self-leveling floors in residential and light-commercial construction. Gypsum floor underlayment can be applied to a variety of substrates for both new construction and rehab flooring. Typical applications are less labor-intensive than many other types of construction and provide the additional advantages of high fire ratings and sound isolation that characterize gypsum systems. Other benefits of gypsum floor underlayments (unmatched by other commonly specified underlayment):

- Compressive strengths up to 5,000 psi. They can be applied over plywood at thicknesses of only 0.75 inches.
- Crack-free surfaces. In addition, their slight expansive nature seals openings around pipes and other penetrations to enhance sound control.
- Quick installation. Up to 30,000 SF can be installed in a day, and fast setting permits the return of light construction traffic within hours.

To learn how gypsum floor underlayments can save money and provide project solutions, visit [usg.com](http://usg.com).

**Plaster Casting and Glass-Fiber Reinforced Gypsum Products** USG Moulding Plaster and HYDROCAL Brand White Gypsum Cement are ornamental plasters for specialized cast work, such as ornamental trim, running cornices, and castings. HYDROCAL Brand FGR-95 Gypsum Cement is designed for use with chopped glass fibers or glass fiber mat to fabricate lightweight, fire-resistant decorated shapes, architectural elements, column covers, cornices and trims.

**Agricultural and Landscaping Products** USG's Industrial Gypsum Division has many other specialty products for diverse applications such as: agricultural soil supplements, landscaping erosion control, plastic and pharmaceutical fillers, bridge deck repair and more.

## Online Tools & Contact Information

USG provides a variety of online tools to help building professionals gather product information and specifications, compare products against relevant codes and regulations, and review design and application ideas and effective installation procedures. The website is continuously updated to ensure that it contains the most current and accurate data. Information is presented in ways that are easy to access and apply.

Visitors may access our corporate homepage at [usg.com](http://usg.com) and then easily navigate across the site to topics of particular interest. Or, they may go directly to selected topics by opening the following application- and product-specific pages:

[downwithdust.com](http://downwithdust.com)  
[getmoldfacts.com](http://getmoldfacts.com)  
[gypsumsolutions.com](http://gypsumsolutions.com)  
[levelrock.com](http://levelrock.com)  
[usgdesignstudio.com](http://usgdesignstudio.com)  
[seismicceilings.com](http://seismicceilings.com)  
[sheetrocktools.com](http://sheetrocktools.com)  
[sustainableceilings.com](http://sustainableceilings.com)