GYPSUMATION

The Newsletter of the Gypsum Association Supplement to Construction Dimensions Magazine

Gypsum Association Now International Code Council Preferred Provider

The Gypsum Association (GA) is pleased to announce that it has been designated a Preferred Provider under the International Code Council (ICC) Preferred Provider Program (PPP). The GA already is an American Institute of Architects (AIA) Continuing Education System (CES) Provider.

FALL 2016

The ICC PPP provides building code officials and others with education related to codes, standards, and guidelines, as well as building construction materials, products, and methods. The GA's online course, Understanding the GA-600 *Fire Resistance Design Manual*, can be taken for .20 ICC Continuing Education Units (CEUs) in the specialty area of fire. The same course provides 2 AIA Learning Units in health, safety, and welfare (HSW) education. Credit is based on successful completion of an online exam at the end of the course. The course is found on the GA website at www.gypsum.org/online-courses/.

Revised on a three year basis, GA-600, *Fire Resistance Design Manual*, has been referenced by the model building codes as a source of fire resistive designs for more than 40 years. The manual is currently referenced by the *International Building Code*, and *The National Fire Codes*, as well as many state and local jurisdictions in the US and Canada as a source document for fireresistance and sound-control rated designs that incorporate gypsum board in a variety of building systems. "The *Fire Resistance Design Manual* plays a key role in both designing and building for fire safety," says GA Executive Director Stephen H. Meima, adding, "Providing online education about the manual for construction, codes and standards professionals—as well as designers will contribute to greater understanding of fire resistance across the full design and construction spectrum."

The ICC certifies over 14,000 code officials, inspectors, plan reviewers, permit technicians, special inspectors, and students every year. Certifications must be renewed every three years, with renewal based primarily on participation in educational programs. To maintain a level of quality assurance for the credibility of the ICC certification renewal program, the use of ICC or Preferred Provider training is now required as a condition of all certification renewals.

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Joint Treatment in Severe Weather, Application of Gypsum Sheathing are Topics of Revised Technical Documents

In May, the GA released two revised technical documents, GA-236, *Joint Treatment Under Extreme Weather Conditions* and GA-253, *Application of Gypsum Sheathing*. Both documents are available for free download from the GA Bookstore as a service to the design and construction community.

For more than 15 years, GA-236 has provided special instructions for treating joints during weather extremes. Periodic revision of the document ensures that recommendations reflect current best practices. Very high or very low temperatures and humidity levels affect the drying times of joint compounds. Moreover, swings in temperature or moisture levels can cause movement in wood or steel framing. GA-236-2016 continues to offer common sense measures designed to mitigate problems associated with extreme weather.

New to GA-236-2016 is a graphic developed by the Drywall Finishing Council (DWFC) that illustrates joint compound drying times as a function of temperature at a specific relative humidity. According to DWFC President Robert Negri, "The Council responded to the drywall finishing trade's need for practical, value-added information that related to finishing in a realistic time frame, which was within 5 days or less. Improving the quality and standards of the drywall finishing industry through informative publications like GA-236 is a win-win for the drywall finishing and decorating trades as well as the manufacturers of drywall finishing products." GA Director of Technical Services Michael Schmeida praised the DWFC saying, "This graphic representation of drying times under specific conditions provides great guidance for contractors in the field, especially those who work in regions where temperature and humidity levels are a frequent concern." Schmeida went on to note, "The revision of GA-236 is just the latest example of successful collaboration between the DWFC and the GA and reflects our mutual commitment to the industry we serve."

GA-253-2016, *Application of Gypsum Sheathing* describes proper methods of handling, storing, and applying a gypsum panel product type that is increasingly popular as a substrate for exterior cladding. With a water-resistant gypsum core and water-repellent surface, gypsum sheathing is used under wood, aluminum, or vinyl siding as well as brick, exterior insulation and finish systems (EIFS) and stucco exterior finishes. GA-253 clarifies fastener recommendations and better defines the appropriate water-resistant barriers for use in conjunction with gypsum sheathing.

Because gypsum sheathing frequently is specified as part of a fire-resistive system, GA-253-2016 mandates that construction details comply with systems tested by recognized testing facilities using ASTM E119 or CAN/ ULC-S101 fire testing procedures. In addition, both firerated systems and sound-rated systems that incorporate gypsum sheathing must follow the requirements described in the GA-600, *Fire Resistance Design Manual*, now in its 21st edition.

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Dick Edwards holds numerous ICC Certifications, including Plans Examiner and Green Building Plans Examiner. He is also Chairman of the Building Standards Institute, a licensed general contractor, and expert witness. With more than 20 years of experience in field of construction and engineering, Edwards has this to say about the new course, "Thank you Gypsum Association for offering the online course on the 2015 *Fire Resistance Design Manual*. I use this manual at every plan review I perform and still am amazed at how poorly architects understand this highly important Standard Reference."

There is no cost associated with the course. Even if you don't need continuing education credit, Understanding the *GA-600 Fire Resistance Design Manual* is an excellent way to learn more about fire resistance and sound control, or to test your existing knowledge of these important design considerations.

Gypsum Association to Release Environmental Product Declaration for Glass Mat Gypsum Panels

As *Gypsumation* goes to press, the GA is preparing to release an industry-wide environmental product declaration (EPD) for glass mat gypsum panels. Following the standards set in the Association's ISO 21930 compliant product category rules (PCR) for North American glass mat gypsum panels, the EPD provides vital environmental performance information addressing energy consumption, water consumption, global warming, waste, air emissions and other metrics related to production.

The international standards organization, ASTM, served as program operator for both the PCR and the EPD. "ASTM International is to excited work with the Gypsum Association and its member companies to demonstrate their commitment to sustainability," said Timothy S. Brooke, vice president, laboratory services.

Glass mat gypsum panel products are specialized performance products consisting of a noncombustible moisture resistant core encased in fiberglass facers on front and back surfaces and long edges. Also known as "exterior gypsum sheathing," this product provides extended weather protection, mold and moisture resistance, and fire resistance when specified as a component of a building's exterior envelope. Glass mat panels are compatible with a wide variety of exterior claddings including wood, masonry, metal, vinyl and stucco. Already, a standard product in commercial construction, glass mat is increasingly used in the rapidly expanding multifamily residential sector.

Stephen Meima, LEED Green Assoc., executive director of the Gypsum Association, noted, "The development and release of this ISO 14025 conformance, Type III, cradle-to-shipping gate EPD, demonstrates that our member companies are committed to transparency as a means of improving the environment and increasing the sustainability of building products." The GA has been expanding the FAQ section on www.gypsum.org. Below, is one of many FAQs now addressed under the Technical section of the website.

Tech Question

What is a thermal barrier? What gypsum panel product(s) can be used as thermal barriers?

Answer: A thermal barrier is a material that provides some protection from heat for substances that can melt or burn. National Fire Protection Association (NFPA) standard NFPA 275 provides a method for gualifying the fire performance of a thermal barrier. The Temperature Transmission Fire Test and the Integrity Fire Test are used to evaluate a material's capacity to prevent ignition from a standard fire exposure or to delay its occurrence. The code reference often reads as follows, "[Material in question] shall be separated from the interior of a building by an approved thermal barrier consisting of a $\frac{1}{2}$ " (12.7 mm) gypsum wallboard or a material that is tested in accordance with and meets the acceptance criteria of both the Temperature Transmission Fire Test and the Integrity Fire Test of NFPA 275." As indicated in the text above, a $\frac{1}{2}$ gypsum wallboard is a thermal barrier as would be wallboards of greater thickness when applied as part of a fire resistant system.



All-New 21st Edition of the GA-600-15 FIRE RESISTANCE DESIGN MANUAL now with a companion eBook that lets you search, copy & print! Environmental Product Declaration continued from page 2

The GA commissioned the Athena Sustainable Materials Institute (ASMI) to perform the Life Cycle Assessment (LCA) that informs the EPD and to produce the EPD Project Report. Noting the GA's long standing engagement in environmental reporting, which includes LCA work on regular gypsum wallboard, an EPD for 5/8" type X gypsum wallboard, as well as the new EPD for glass mat gypsum panels, ASMI's Research Principle Jamie Meil said, "The Association's member companies keep stepping up to push environmental labelling and product transparency reporting. Gypsum based product use is so ubiquitous in today's buildings we expect that these EPDs will be constantly cited and used to support EPD credits available in green building rating systems."

The EPD and PCR will be posted to the ASTM website. Both the EPD and the EPD Project Report will be available at gypsum.org.

ERRATA ISSUED: In January 2016, the Gypsum Association (GA) released GA-216-2016, Application and Finishing of Gypsum Panel Products. On page 3, section 2.2.12.4 should read:

2.2.12.4 Where studs complying with ASTM C645 are used to receive Abuse Resistant or Impact Resistant Gypsum panels, they shall be not less than 0.0312 in. (0.792 mm) design thickness and shall be in accordance with sections 4.3 and 8.1 of Specification C645.

The correction clarifies the recommended thickness for steel studs receiving abuse resistant or impact resistant gypsum panels contained in GA-216-2016. The GA is communicating this errata as widely as possible. The electronic version of GA-216-2016 currently reflects this change and hardcopies of Application and Finishing of Gypsum Panel Products are now issued with the clarification noted as an errata inserted on a separate sheet. The errata, itself, is available as a free download on the GA website.

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