I'm not a bot

Share copy and redistribute the material in any medium or format for any purpose, even commercially. Adapt remix, transform, and build upon the material for any purpose, even commercially. The licensor cannot revoke these freedoms as long as you follow the license terms. Attribution You must give appropriate credit , provide a link to the license, and indicate if changes were made . You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use. ShareAlike If you remix, transform, or build upon the material, you must distribute your contributions under the same license as the original. No additional restrictions You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits. You do not have to comply with the license for elements of the material in the public domain or where your use is permitted by an applicable exception or limitation . No warranties are given. The license may not give you all of the permissions necessary for your intended use. For example, other rights such as publicity, privacy, or moral rights may limit how you use the material. Using a gypsum panel from a manufacturer other than the one specified in a proprietary or fire-rated system can have significant implications for code compliance, fire resistance performance, and warranty coverage. To address this situation appropriately, follow these steps:Begin by identifying the systems designation, such as the GA File Number (from GA-600-2024 - Fire Resistance and Sound Control Design Manual), UL Designation, or the specific fire test number. This identification is critical to ensure you're referencing the correct tested construction and to facilitate accurate comparisons.Contact the Technical Departments: Reach out to the technical departments of each gypsum panel manufacturer involved. Each manufacturer should be able to provide documentation for their own fire-tested assemblies that closely match the referenced design. In many cases, they may also advise whether their product can be considered an equivalent for the intended use.Compare Design Assemblies: Evaluate the assemblies for key differences. Pay particular attention to factors such as:o Panel orientationo Fastener spacingo Joint alignment (in-line vs. offset)o Stud type and dimensionso Insulation requirements (if any)The manufacturers technical staff can often assist with this comparison.Determine the Conservative Approach: Identify which assembly is more conservative and review the proposed solution with the Authority Having Jurisdiction (AHJ). Proceed with construction using the more conservative assembly, pending AHJ approval.Update Documentation: If changes are necessary, issue a change order to reflect the revised assembly in the construction documents.Obtain Documentation (if required): In some cases, the AHJ may require a letter from the gypsum panel manufacturer(s) confirming the acceptability of the substitution.Maintain Records: Regardless of whether a letter is required, it is essential to notify the manufacturers involved. Doing so ensures a record is maintained, which may be important for warranty validation or in case any issues arise in the future. Yes. Per GA-216-2024 Application and Finishing of Gypsum Panel Products Section 4.6.7 on single-layer application and Section 4.6.8 and its subsections on multi-layer applications, the joints at the ends of the panels must be staggered, regardless of whether the application is horizontal or vertical. The full article can be found here. No.Per the explanatory notes in GA-600 Fire Resistance and Sound Control Design Manual, just because a system may be designated as say an interior partition does not mean it cannot be used in other applications. For example, systems based off of UL Design U305 are very often used in exterior applications (many houses have U305 based designs as the exterior wall). But, when such a system is used for an exterior wall, the exterior panels must be an exterior gypsum sheathing and not just traditional interior wallboard. For a list of exterior panels that can be used in systems like U305, consult GA-605 Gypsum Panel Products for Use in UL Classified Systems. The full article can be found here. Remove the loose paper around the damaged area. Apply a coat of joint compound on the abrasions or scratches, filling the area completely. For damage that is deeper or penetrates the board, consult with the manufacturer of the panel. More information can be found in GA-225-2019 Repair of Fire-Rated Gypsum Panels by clicking here. Gypsum panels, particularly paper-faced gypsum wallboard, must be kept dry at all times to prevent the growth of mold. Review publication GA-238-2016Guidelines For Prevention of Mold Growth on Gypsum Board.This quick reference publication will note transportation, storage, handling, application, and maintenance guidelines. You will want to reference GA-231-15Assessing Water Damage To Gypsum Board. Most notably, gypsum board that has been exposed to sewage or flood waters must be replaced. Levels of bacteria, such as E. coli, can be hundreds of times above safe levels in flood water. Also, hydrocarbons from underground gas storage tanks and fuel leaks from submerged vehicles can be present. Often, the gypsum board will need to be removed anyway to assess the underlying substructure. Reference GA-1000-2017Identification of Gypsum Board. This two-page publication will help you identify the criteria that are enforced in the U.S. and Canada for the sale and installation of gypsum board. Ensuring you are using gypsum board that meets the ASTM C1396 standard will help avoid specific local code violations. Never use board that is not labeled appropriately. Building codes throughout the United States require each individual sheet of gypsum board have the following information legibly printed on the back surface of each board, parallel to the bound edge of the board:The name of the manufacturing company or a unique alpha code identifying the name of the manufacturing company. The decision to print the name of the company or to create and use a unique code is at the discretion of the company.A code identifying the manufacturing facility and, where applicable in a multiline facility, the production line.A code identifying the date and time of manufacture.The country of manufacture as designated by the three letter code in ISO 31661. The code for United States is USA. The code for Canada is CAN. Pages 8 and 9 of GA-801-2017Handling and Storage of Gypsum Panel Products: A Guide for Distributors, Retailers, and Contractorsdescribes guidelines for stocking gypsum panel products on job sites. GA-801-2017 notes that gypsum panel products must be delivered just prior to installation time. This practice helps minimize damage to the material and reduces the risk of mold growth in surrounding areas of elevated moisture. GA-801 also states that panels must be kept in an enclosed covered, dry area, such as a garage, to minimize exposure to rain, etc. This is a very complex question that involves exposures to fire, heat, water, and smoke. First, lets look at just the fire and heat exposure resulting from a fire. For fire rated assemblies, the GA-600,Fire Resistance and Sound Control Design Manualstates, It is the intent that classifications shall register performance during the period of exposure and shall not be construed as having determined suitability for use after fire exposure. Therefore, any assembly directly exposed to the fire should be rebuilt. For rated-assemblies not exposed directly to the fire, it is always best to have a certified/licensed fire protection engineer or inspector assess them and determine if they are still capable of performing as designed in a future fire. For non-fire rated assemblies exposed directly to the fire, replacement is also suggested as the exposed gypsum board would have experienced adequate heat to begin calcination. The board may be brittle, the paper face burned off, etc. Again, for gypsum board in non-exposed rooms, a judgment call by a specialist should determine the extent, if any, of replacement. However, fires also result in exposure to smoke and water. Water is the easiest to assess. First, it is critical to determine if the studs and other materials in the wall cavity are dry and undamaged. It is likely that at least some gypsum board will be removed to inspect the cavity and require replacement. If it can be verified that the contents of the wall cavity are dry and undamaged, a thorough examination of the board itself is necessary: The panels must be dry and free of mold with the paper facing completely intact. If in doubt, play it safe and replace the board. Smoke damage is very subjective. Visible smoke damage, such as signs of soot, must be repaired. Some individuals claim to smell smoke in sealed and repainted rooms years after a fire. Other people never catch a hint of the odor. Restoration services exist that are licensed and bonded, and these specialists should be consulted to determine if restoration without replacement is possible. No. In multi-layer systems, the joints and fasteners in the base layers are covered and protected by the overlying layers of gypsum board. Any nail having a length, shank diameter, and head diameter equal to or greater than the dimensions specified for the cooler nail in the system description can be substituted for the cooler nail. Working with UL, the GA and its members have determined that approximately 1 (25.4 mm) is an acceptable tolerance in the spacing defined in a fire-rated assembly. According to ASTM C1396/C1396MStandard Specification for Gypsum Board, Section 13.1, Gypsum board, except for pre-decorated gypsum board, is intended to be a substrate. The surfaces of gypsum board shall be true and free from imperfections that would render it unfit for finishing and final decoration. Gypsum board shall be installed and finished to the specified level in accordance with Specification C840. All gypsum board used in interior wall and ceiling applications should be finished with tape and joint compound embedded in joints and interior angles, as well as an appropriate primer and paint. The application of these materials protects the integrity of gypsum board. Note, in a fire-rated system that includes multiple layers of wallboard, only the visible, board surface needs to be finished with tape, joint compound, primer, and paint. Paint and primer are unnecessary only in concealed areas that receive little or no active use, examples include attics and plenum areas above ceilings. Paint and primer are not necessary for these areas but tape and joint compound are required to provide fire resistance. To determine the level of finish appropriate to a specific situation, including gypsum panel products used as a substrate for tile, as a base for textured finishes, wallcoverings, and paints of various sheens, and lighter and darker tones, consult GA-214-2015,Recommended Levels of Finish for Gypsum Board, Glass Mat and Fiber Reinforced Board, available in theGA Bookstore. Fire-resistive duct enclosures, especially those that are three-sided, provide some unique and challenging design and construction scenarios. Many times they are constructed of a fire-resistance rated wall assembly for the vertical side surfaces and a fire-resistance rated horizontal membrane for the bottom of the enclosure. In most cases, the code specifies that fire-resistive enclosures around ducts be symmetrical (i.e. the inside of any one plane must be identical to the exterior). The intent is that regardless of whether the fire is on the inside or outside of the enclosure, it has the same degree of restriction. If an assembly is asymmetric but tested and certified both ways and passes the required fire-resistance criteria, it is acceptable. When designing the enclosure, remember that systems designed/tested for vertical surfaces cannot be arbitrarily used on the horizontal (i.e. underneath side) of the enclosure. This is the case for wall systems, which cannot be used arbitrarily in floor-ceiling applications. Finally, the system must be built as the individual assemblies were tested. In a duct-specific enclosure, the supports for the assemblies must be tied in, etc. per the drawings for that system. Also, system designs adapted from tested wall or floor-ceiling assemblies must be supported/built as in the drawings for the full system, including right-sized structural members, spacings, fasteners, and, etc. In the end, consulting with a fire design engineer is usually a very good idea when dealing with a fire-resistive duct enclosure. 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 qualifying the fire performance of a thermal barrier. The Temperature Transmission Fire Test and the Integrity Fire Test are used to evaluate a materials 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 1/2 -inch (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 gypsum board is a thermal barrier as would be gypsum panels of greater thickness when applied as part of a fire-resistant system. Want to learn more?Read Thermal Barriers and Ignition Barriers for the Spray Polyurethane Foam Industry. Joints between boards in fire-rated assemblies must be in moderate contact, meaning that the gypsum boards should be touching and gaps minimal. All gaps and joints in such assemblies must be properly taped and filled with compound. Around electrical boxes, the UL Fire Resistance Directory references no more than a 1/8 (3.2 mm) gap/joint, though in the field this can be difficult to attain and measure. All gaps must be filled with joint compound, fire-rated caulking or other materials/means suitable, per the local code authority. In non-rated construction, joints up to (6.4 mm) tolerances are acceptable when filled with setting type, all-purpose joint compound. Note that the type of compound used to prefill gaps in the joints must be compatible with the compounds used to tape and finished the walls and/or ceiling. More information on joint tolerance is contained in the Northwest Wall and Ceiling Bureau Document #500-103Gaps at Gypsum Board Jointsavailablehere. More often than not, the answer is yes. In addition, fire-resistant walls often serve as a smoke barrier wall, which must be caulked. And, while some may see this as a control joint, the joint itself is not normally tested in most assemblies.TheInternational Building Codeaddresses this firestopping in Section 715 as directed in Section 708: 708.8 Joints. Joints made in or between fire partitions shall comply with Section 715. 715.1 General. Joints installed in or between fire-resistance rated walls, floor or floor/ceiling assemblies and roofs or roof/ceiling assemblies shall be protected by an approved fire-resistant joint system designed to resist the passage of fire for a time period not less than the required fire-resistance rating of the wall, floor or roof in or between which the system is installed. Fire-resistant joint systems shall be tested in accordance with Section 715.3. Exception: Fire-resistant joint systemsshall notbe required for joints in all of the following locations:Floors within a single dwelling unit.Floors where the joint is protected by a shaft enclosure in accordance with Section 713.Floors within atriums where the space adjacent to the atrium is included in the volume of the atrium for smoke control purposes.Floors within malls.Floors and ramps within open and enclosed parking garages or structures constructed in accordance with Sections 406.5 and 406.6, respectively.Mezzanine floors.Walls that are permitted to have unprotected openings.Roofs where openings are permitted.Control joints not exceeding a maximum width of 0.625 inch (15.9 mm) and tested in accordance with ASTM E 119 or UL 263.715.1.1 Curtain wall assembly. The void created at the intersection of a floor/ceiling assembly and an exterior curtain wall assemblyshall beprotected in accordance with Section 715.4. Additional information on the topic of firestopping can be obtained from a firestopping manufacturer or The International Firestop Councilwww.firestop.org/. R-value (resistance value) measures the capability of a material or assembly to resist the transmission of heat. As energy codes have strengthened over the past several code cycles, so have the R-value requirements for exterior walls and roof assemblies. As codes have become less prescriptive and more performance-based, calculating R-values is becoming a design team duty. The GA does not list R-values for wall assemblies due to the high degree of variability between what is shown in GA-600 and what is actually constructed. Common elements, such as resilient channels, thicker studs, decreased stud or joist spacing, varying amounts and types of insulation, etc., are variables that are allowed for any system, per the General Explanatory Notes in GA-600. Variables such as cladding type also play a role in total R-value. However, calculating the R-value for an assembly is not exceptionally difficult, as it is essentially the sum of the R-value of the individual layers, accounting for stud closeness. ASHRAE, ICC, DOE, and others have developed code acceptable practices and methods for calculating R-values. One online tool based on ASHRAEsHandbook of Fundamentalsis available atwww.ekotrope.com/r-value-calculator/. A quick online search will provide additional online tools for performing these calculations. Mold/moisture resistant gypsum panels are excellent for use in high humidity areas and even where an occasional splash of water is expected. Appropriate areas include powder rooms, adjacent to showers or tubs, behind counter areas/base cabinetry where plumbing fixtures are located, and in laundry rooms, mud rooms, etc. However, neither the model codes nor the Tile Council of North Americas (TCNA)Handbookallows for the use of these panels behind the tile in the shower or tub area or as a base under the pan or around a swimming pool or sauna. For acceptable materials in wet areas, consult the local code or the TCNA. Over the years, the Gypsum Association has worked with many organizations to develop recommendations on finishing. The most important recommendation is priming: Before any additional decoration, gypsum board must be primed. For a more complete guide on painting and finishing new wallboard, we suggest the Drywall Finishing Council publication entitled, Recommended Levels of Paint Finish Over Gypsum Board. Access this publicationhere. Additionally, GA-214Recommended Levels of Finish for Gypsum Board, Glass Mat and Fiber-Reinforced Gypsum Panels, provides guidance for surface preparation. GA-214 is available inhere. The short answer is no. Any gypsum board that has been damaged by fire or as a result of the firefighting process must be replaced; however, a board that was simply exposed to smoke has no definitive replacement criteria. In this case, the replacement will be determined on a case-by-case basis by the owner, contractor, and the insurance company. This question, like many received by the Gypsum Associations Technical Services Department, is answered by referencing theManualsGeneral Explanatory Notes. Note 19, page 20, in the 22ndedition of theManual, GA-600-2018, provides the answer: "Specified floor-ceiling and roof-ceiling framing sizes or truss dimensions areminimums. Greater joist or truss sizes (depths) shall be permitted to be used in metal- or wood-framed systems . . . [emphasis added]." As a sawn lumber joist is of greater dimension and mass than the same sized I-joist (you can see this by looking at the cross-section), as long as the structural criteria are met, you may make the substitution. Green board has been around the industry for a few decades now. Building its reputation as a water-resistant option for drywall installation, its green-hued face paper gave the product its namesake, but its original design was limiting. In time, USG developed a product to improve the shortcomings of old green board; a new drywall that prevented moisture from penetrating its face and back papers. Only this time it wasnt green, but blue. Sheetrock Brand Humitek Gypsum Panels, introduced in 2003, were lauded by the Chicago Tribune as one of the biggest drywall breakthroughs since 1890 for the building industry. With the products release, USG provided the industry with a cutting-edge solution for areas of moisture in both residential and commercial spaces. Breaking the Mold Rather than rest on their laurels, USG advanced its Humitek technology with the introduction of Sheetrock Brand Mold Tough Panels in 2007. These panels were the first patented wallboards that actively inhibited mold growth on the surface paper, from front to back, as well as moisture resistance in the gypsum core. Utilizing proprietary technology, ingredients were added during the manufacturing process to protect the wallboard from moisture and mold and adopted the familiar, green-faced appearance of green board with both mold- and water-resistance. As a result of the premium performance of Sheetrock Brand Mold Tough Gypsum Panels, this new product consolidated replaced both Sheetrock Brand Humitek Gypsum Panels and USGs water-resistant (green board) product line in its family of industry-leading solutions. The credentials performance of Mold Tough technology proved that it was more than your average green board. But there is still a greater discussion of the building science to be had about how buildings surfaces develop materials that attract mold in the first place. What is ASTM D3273? ASTM International, which sets the industry standards for testing and evaluation of different performance criteria, provides the framework for understanding degrees of mold resistance performance. ASTM D3273is the standard test used to measure the resistance of wallboard for mold and provides an evaluation of wallboards resistance to mold growth. It is important to note that this ASTM lab test does not accurately represent the mold performance of building materials in the field. Given unsuitable project conditions during storage, installation, or after completion, mold can overwhelm any building material. To manage the growth of mold, the best and most cost-effective strategy is to protect building products from water exposure during storage and installation and after completion of the building. This can be accomplished by using good moisture management design and construction practices. Control Moisture, Control Mold Even if your drywall contains moisture- and mold-resistant properties, it can still be at risk for mold growth if not for careful design, proper construction, and thorough maintenance. These factors are meant to manage moisture, which is the only variable that can be controlled within the construction environment. The risk for mold growth can be elevated by: Product storage and installation condition Faster track schedules Poor execution of water control Energy-efficient buildings without moisture management design. Snow and rain exposure during the construction phase Inadequate drying of concrete, plaster, and paint as a building is completed Roof and pipe leaks Excess water penetration of the faade Natural disasters Adopting a building science and systems approach to managing water has proven to be the most effective strategy for controlling moisture and minimizing the growth of mold. Since mold occurs naturally everywhere in our environment, it is important to know how construction practices can influence moisture management. Moisture is criticalbecause mold is unable to develop and grow without it. When the risk of moisture exposure is present, be sure to choose products and systems that offer added resistancein conjunction with sound design and construction practices. Limiting moisture during the construction phase allows mold-resistant products to act as extra protection against mold growth when incidental moisture (condensation, steam, or dampness) is present. In areas with limited moisture exposure, USG Sheetrock Brand UltraLight Panels Mold Tough (Regular and Firecode X) is recommended. Featuring a noncombustible moisture- and mold-resistant core that is encased in moisture- and mold-resistant, 100% recycled green face and brown back papers, these panels protect against incidental wetting and the resulting mold growth, but must be protected from elements before, during, and after construction due to the paper facings. For areas where extended moisture exposure is present, such as pre-dry-in construction (also known as top-down or fast-track), USG Sheetrock Brand Glass-Mat Panels Mold Tough (Regular and Firecode X) are the ideal solution. These panels feature a noncombustible moisture- and mold-resistant core encased in an inorganic fiberglass mat that sheds water. An Unrivaled Moisture- and Mold-Resistant Solution When it comes to controlling moisture and resulting mold growth, it can be hard to separate fact from fiction. But the bottom line is thismold spores are everywhere, and they can grow on virtually any surface where moisture is present. Consequently, controlling mold growth begins with moisture control through best building practices. Adding the right protection in the right places is a critical aspect of the equation. And thats where USG Sheetrock Brand gypsum panels with Mold Tough technology really make their mark. These panels come from a comprehensive product line of moisture- and mold-resistant solutions that meet ASTM C1396 specifications. This ensures that our customers have only the highest-performing materials in the fight against mold and moisture. For more than 100 years, USG has been the leading manufacturer of the highest-performing building materials within the industry. You can trust that when you choose our products, you will get unrivaled quality every time. With such a storied history of innovation, USG has proven that green is still good. Learn more about USGs moisture- and mold-resistance here. Controlling moisture whether from rain, snow, groundwater, humid air or water vapor is critical to ensuring the long-term durability of buildings. Left unchecked, the slow creep of moisture can cause mold and bacteria growth, wood rot and insect infestations that diminish indoor air quality, shorten the buildings service life and reduce occupant comfort.Gypsum board is well known for its fire-resistance properties and thats the main reason it gained popularity as a reliable building material in the mid-20th century. But by the end of the century, product innovation had transformed gypsum board into a high-performance building material that could also help architects design durable wall assemblies that resist damage from moisture, mold and mildew.National Gypsum Company offers a continuing education course titled High-Performance Gypsum Board for Todays Buildings to assist architects in understanding the different types of high-performance gypsum boards and how to specify them. The course offers 1 Contact Hour of Health, Safety and Welfare Education and 1 GBCI General Hour.This CEU course has five learning objectives.Examine ASTM standards for installing fiberglass-faced gypsum panels and explain how these products protect against mold growth and moisture infiltration, ensuring a healthy indoor environment for occupants.Illustrate how the physical properties of gypsum contribute to the effectiveness of gypsum panel products during a fire, ensuring the safe evacuation of building occupants.Identify the importance of specifying products that provide dimensional stability and a substrate for constructing high-performance, resilient wall assemblies.Demonstrate the durability and strength of fiberglass-faced gypsum products compared to paper-faced gypsum board, emphasizing their higher compressive strength.Describe how sustainable gypsum panel products can contribute to the LEED rating system and promote healthier spaces for occupants.The National Gypsum Continuing Education program provides online and in-person courses for the design and building community. Presented by the Construction Design Manager team, courses cover product applications, technical standards and industry trends. All courses qualify for AIA learning credits.Whats the difference between paper-faced drywall and high-performance gypsum board?Paper-faced gypsum board has been in use since 1917 and can be made of mined gypsum rock or byproduct gypsum made from the cleaning emissions of coal power plants. While additives to the gypsum core and paper facing provide mold and mildew resistance, moisture can still damage paper-faced gypsum boards if they get wet over a prolonged period of time.High-performance gypsum panels are encased with fiberglass mat that make them moisture resistant, resulting in these high-performance characteristics: Inherently mold resistantDimensionally stable under temperature and humidity changesSuperior strengthSuperior fire resistanceWithstand up to 12 months of exposure to typical weather conditionsHow are high-performance gypsum boards tested for mold resistance?Mold-resistant gypsum products are tested per the ASTM D3273,Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber.The gypsum panel is placed in an environmental chamber set to a relative humidity range between 95% and 98%.Mold spores are injected into the soil.After 28 days, the panel is scored on a scale of zero to 10.A score of 10 represents no mold growth and fiberglass-faced gypsum products score a 10.What applications are high-performance gypsum boards designed for?High-performance products, such as those in the Gold Bond eXP family of products, are recommended for constructing durable wall assemblies anywhere moisture is a concern.Exterior applicationsMoisture-resistant drywall, such as high-performance fiberglass-faced gypsum panels, are a good option for any part of the building that will be exposed to weather during construction. That includes elevator and stairwell shaft enclosures, the building envelope and the roof.Gold Bond Building Products, LLC, an affiliate of National Gypsum Company, manufactures high-performance products designed to withstand the rigors of everyday weather exposure and reduce the chance of moisture and mold damage.Interior applicationsIn addition to being moisture and mold resistant, high-performance fiberglass-faced gypsum panels can also solve many design challenges inside the building. They are a key element in durable wall assemblies.In addition, all of these products can be part of UL fire-rated designs.Ready to get more out of gypsum board?Take our High-Performance Gypsum Board for Todays Buildings continuing education course to better understand the nuances of high-performance gypsum products. Contactthe National Gypsum Construction Design Manager team, which brings a wealth of design and construction expertise, to schedule an in-person presentation.Moisture-proof gypsum board and waterproof gypsum board difference1. Ordinary waterproof paper gypsum board is based on the traditional paper gypsum board on the basis of innovation and development of a new product, not only has all the advantages of gypsum board, but also in the gypsum board plate core to add some additives, making Waterproof time is longer.2. Positioning point waterproof paper gypsum boardPositioning point waterproofing Based on the traditional water-resistant paper gypsum board on the basis of innovation and development of a new product, not only has the traditional water-resistant plaster board all the advantages, but also to solve the traditional water-resistant paper gypsum board construction process artificial Belt positioning to bring the labor intensity, the product is easy to damage, construction efficiency is low, the quality of the project can not fully guarantee the problem.3, moisture-proof gypsum board and waterproof gypsum board almost the same, but the waterproof gypsum board core and face paper are waterproof, not directly exposed to the wet environment, nor direct water or soak for a long time. Therefore, waterproof gypsum board and moisture-proof gypsum board is different. 2025 Copyright. All Rights Reserved Privacy Policy Gypsum board, commonly known as drywall, is a prevalent construction material used in the interiors of residential and commercial buildings. It provides a smooth surface for painting and wallpapering and acts as a fire-resistant barrier. However, not all gypsum boards are created equal. Regular gypsum board and moisture-resistant gypsum board serve different purposes and possess distinct characteristics. In this blog post, Specialized Drywall OJ INC delves to the differences between these two types of gypsum board, exploring their composition, applications, benefits, and potential drawbacks. Regular gypsum board is primarily composed of gypsum, a mineral known for its ability to resist fire. Gypsum is a naturally occurring sulfate mineral that is processed and pressed between two thick sheets of paper to create drywall. The core of the board is made from a mixture of gypsum, water, and additives that improve its durability and workability. The paper facing on both sides is usually made from recycled paper, which provides additional strength and a surface for finishing. Regular gypsum board, commonly used in construction, consists primarily of a core of gypsum (calcium sulfate dihydrate) encased in layers of recycled paper. This composition makes it lightweight, easy to handle, and fire-resistant. It is ideal for interior walls and ceilings. For optimal performance and durability, professional gypsum board services ensure proper installation and finishing, addressing potential issues like moisture resistance and seamless integration with existing structures. Moisture-resistant gypsum board, often referred to as green board due to its distinctive green color, is designed specifically for use in areas prone to moisture exposure. While the core is still composed of gypsum, moisture-resistant gypsum board incorporates a special water-resistant core that contains silicone or other water-repelling additives. The paper facing is also treated with water-resistant chemicals to prevent water absorption. One of the most noticeable differences between regular and moisture-resistant gypsum board is their appearance. Regular gypsum board typically has a white or off-white paper facing, whereas moisture-resistant gypsum board has a green or blue hue. The green color is the result of the water-resistant treatment applied to the paper facing, which distinguishes it from the standard version. Regular and moisture-resistant gypsum board differ primarily in their core composition and paper covering. Regular gypsum board features a standard paper liner and a gypsum core, making it suitable for dry areas. In contrast, moisture-resistant gypsum board has a special water-resistant core and a green or blue paper covering that helps it resist moisture and mold. This makes it ideal for high-humidity areas like bathrooms. For more details, explore the difference between regular and moisture-resistant gypsum boards. Regular gypsum board is widely used in interior construction for walls and ceilings in areas where there is minimal risk of moisture exposure. It is commonly found in living rooms, bedrooms, offices, and hallways. Its ease of installation, smooth surface, and cost-effectiveness make it a popular choice for contractors and DIY enthusiasts alike. Regular gypsum board can be finished with paint, wallpaper, or texture, allowing for a wide range of aesthetic possibilities. Moisture-resistant gypsum board is specifically designed for use in areas that are subject to high humidity or occasional direct contact with water. This includes bathrooms, kitchens, laundry rooms, and basements. In these environments, regular gypsum board would quickly deteriorate, but moisture-resistant gypsum board provides a longer-lasting and more durable solution. It is also commonly used as a tile backer in wet areas like showers and tub surrounds, where it offers a stable and moisture-resistant surface for tile installation. Installing regular gypsum board is relatively straightforward, and it can be cut, nailed, or screwed into place with standard tools. The joints between sheets are usually taped and finished with joint compound to create a seamless surface. However, because regular gypsum board is not moisture-resistant, care must be taken to avoid installing it in areas where it could come into contact with water. When installing regular gypsum board, consider ensuring proper wall framing, using appropriate fasteners, and applying joint compound smoothly for a seamless finish. Make sure to stagger the seams and fill any gaps for a professional appearance. For insulating walls with gypsum board, start by applying insulation between the studs before installing the boards. This helps to enhance thermal performance and energy efficiency, creating a well-insulated and comfortable environment within your space. The installation process for moisture-resistant gypsum board is similar to that of regular gypsum board, but with some additional considerations. Due to its increased weight and density, moisture-resistant gypsum board may require additional support during installation, and it can be more difficult to cut and handle. Special care must be taken when installing moisture-resistant gypsum board in high-moisture areas to ensure that all joints and seams are properly sealed with moisture-resistant joint compound and tape. Additionally, while moisture-resistant gypsum board is designed to resist moisture, it is not waterproof, and it should not be used in areas with continuous water exposure, such as saunas or steam rooms. In dry environments, regular gypsum board performs exceptionally well. It provides a smooth, paintable surface that can last for many years with minimal maintenance. Regular gypsum board is also relatively fire-resistant, as gypsum naturally contains water in its crystalline structure, which helps to slow the spread of fire. However, the main drawback of regular gypsum board is its vulnerability to moisture. When exposed to water, regular gypsum board can absorb it, leading to swelling, softening, and the potential for mold growth. Once damaged by moisture, regular gypsum board often needs to be replaced entirely, as it does not recover its original properties after drying. Moisture-resistant gypsum board is designed to withstand higher levels of moisture, making it more durable in damp environments. Its water-resistant core and treated paper facing help prevent water absorption, reducing the risk of swelling, softening, and mold growth. However, it is important to note that moisture-resistant gypsum board is not completely waterproof. Prolonged exposure to water or continuous direct contact can still cause damage. Despite this limitation, moisture-resistant gypsum board offers superior performance in environments where regular gypsum board would fail, providing a longer-lasting and more resilient solution in moisture-prone areas. Both regular and moisture-resistant gypsum boards are made from gypsum, a naturally occurring mineral that is abundant and recyclable. However, the manufacturing processes for the two types of gypsum boards differ slightly due to the added water-resistant treatments in moisture-resistant gypsum board. These treatments can introduce chemicals into the environment if not properly managed. Additionally, moisture-resistant gypsum board is more challenging to recycle than regular gypsum board due to its treated paper facing and additives. When considering environmental impact, it is essential to choose the right type of gypsum board for the application to minimize waste and reduce the need for repairs and replacements. Gypsum board is generally considered safe for use in residential and commercial construction. However, there are some health and safety concerns associated with its installation and use. Cutting and sanding gypsum board can create dust, which can irritate the eyes, skin, and respiratory system. This is true for both regular and moisture-resistant gypsum boards, so proper precautions, such as wearing a mask and using dust control measures, should be taken during installation. Additionally, if moisture-resistant gypsum board is installed in areas with poor ventilation, there is a risk of mold growth if water does penetrate the board. The maintenance requirements for regular and moisture-resistant gypsum boards differ based on their intended use. Regular gypsum board in dry areas typically requires minimal maintenance beyond occasional repairs for dents, cracks, or holes. Moisture-resistant gypsum board, however, may require more attention in high-moisture environments. It is essential to regularly inspect moisture-prone areas for signs of water damage, such as discoloration, swelling, or mold growth. Prompt repair of any issues can help extend the lifespan of moisture-resistant gypsum board. Overall, moisture-resistant gypsum board offers better longevity in wet or humid environments compared to regular gypsum board, but both types of board can last for many years if properly installed and maintained. Proper maintenance is crucial for ensuring the longevity of gypsum board installations. Regular inspections, addressing any signs of damage promptly, and controlling moisture levels can prevent issues like mold growth or warping. To install gypsum board over brick or concrete walls, start by preparing the surface, ensuring it is clean and dry. Attach furring strips to the wall, then secure the gypsum board to these strips with screws. This method provides a smooth, even surface for your drywall and helps maintain its durability over time. As building codes and construction practices continue to evolve, there is a growing demand for materials that offer better performance, durability, and environmental sustainability. Advances in gypsum board technology are likely to focus on improving the moisture resistance of both regular and moisture-resistant gypsum boards while minimizing their environmental impact. This could include the development of new additives that enhance water resistance without introducing harmful chemicals, as well as innovations in recycling processes to make it easier to reclaim and reuse gypsum board materials. What is moisture resistant gypsum board? Mold/Moisture-Resistant Gypsum Panels are designed around an improved mold- and moisture-resistant core covered by either treated moisture- and mold-resistant paper facers or naturally mold-resistant fiberglass mats. What are the four types of gypsum board? The different type of gypsum board generally available in the market are drywall white board, fire-resistant board, water-resistant board and exterior board. Drywall white boards, like CoreX boards, are probably the most economical plasterboard type. Which gypsum board is good for a ceiling? Gyproc gypsum plasterboards are a supreme wall and ceiling choice for todays constructions, offering remarkable outcomes in contexts of fire rating, sound absorption, heat insulation, and moisture resistance. What is the lifespan of gypsum board? Assuming normal conditions, gypsum panels and gypsum plaster have an expected service life well in excess of 50 years. In addition, gypsums inherent fire-resistance characteristics help protect buildings and building systems from damage in the event of a fire or heat-related incident. What is regular gypsum board used for? Regular gypsum boards are widely used for creating interior walls and ceilings in residential and commercial buildings. Fire &/or Moisture Resistant Boards Fire and moisture resistant gypsum boards are engineered to provide enhanced protection against both fire and moisture. Understanding the differences between regular gypsum board and moisture-resistant gypsum board is essential for making informed decisions in construction and remodeling projects. Regular gypsum board is suitable for most interior applications in dry environments, offering an affordable and easy-to-install solution. Moisture-resistant gypsum board, while more expensive, provides enhanced durability and longevity in areas prone to moisture exposure, such as bathrooms, kitchens, and basements. Both types of gypsum board have their strengths and limitations, and choosing the right one for each specific application is crucial for ensuring the long-term success and safety of a building. By considering factors such as composition, installation, performance, and environmental impact, builders and homeowners can select the most appropriate gypsum board for their needs, resulting in a durable, aesthetically pleasing, and sustainable interior finish. Selain model konvensional, ternyata ada juga gypsum yang anti air. Berbentuk seperti kalsium silikat, produk ini diklaim bebas asbestos alias tidak berbahaya. Selain tahan terhadap air, rata-rata gypsum water resistant juga tahan terhadap benturan di area koridor. Sudah ada banyak merk yang meluncurkan tipe seperti ini, termasuk Jayaboard, dengan harga yang memang lebih mahal dibandingkan model biasa. [caption id="attachment_124833" align="aligncenter" width="680"] Outlet Jayaboard (sumber: jayaboard.com)[/caption] Sudah ada banyak bahan yang dapat dipakai untuk bagian rumah dengan tingkat kelembapan tinggi, seperti plafon, terutama di kamar mandi. Anda bisa menggunakan plafon PVC yang memang sudah tersohor dengan struktur yang kuat dan telah sering dipakai untuk keperluan seperti pipa dan lainnya. Ada pula plafon dengan bahan metal yang terbuat dari baja serta material GRC atau glass fiber reinforced concrete. Selain bahan-bahan di atas, Anda pun dapat memanfaatkan gypsum, terutama yang anti air. Seperti diketahui, penggunaan gypsum, terutama untuk interior, sekarang sudah semakin meluas, disebabkan material ini memiliki karakteristik yang tahan terhadap api dan finishing yang sangat baik. Selain itu, papan gypsum juga dinilai tahan terhadap api, jamur, dan serangga, serta mudah dikerjakan.[1] Gypsum sendiri, selain tersedia dalam model yang biasa, sekarang juga hadir dengan fitur anti air. Papan gypsum water resistant berdesain seperti papan kalsium silikat, tetapi bebas asbestos sehingga tidak berbahaya bagi kesehatan. Selain tahan terhadap air, gypsum model ini juga diklaim tahan terhadap benturan di area koridor, berkekuatan mendekati bata, punya akustik yang baik, sulit terbakar, serta bisa dibuat dalam bermacam-macam bentuk. Sudah ada sejumlah pabrikan atau merk yang meluncurkan gypsum board anti air, salah satunya Jayaboard. Ini adalah brand papan gypsum yang terdiri atas inti gypsum plaster yang dibungkus oleh kertas penguat di sekelilingnya. Permukaan papan di bagian tepi berbentuk miring atau recessed edge, sedangkan bagian ujung terpotong terpisah oleh pisau guillotine. Selain itu, ada juga pilihan tepi kotak untuk aplikasi khusus. Seperti disalin dari website resminya, papan gypsum Jayaboard saat ini setidaknya hadir dalam dua kategori besar, yaitu Standard Board dan Technical Board. Untuk Standard Board, terdiri atas Jayaboard Sheetrock, Sheetrock Protech, Jayaflex, dan Ultimate Project. Sementara itu, untuk varian Technical Board, tersedia model ArtSound, Firestop, Heatstop, Impactstop, Jayabell EchoStop, Moldstop, Soundstop, Wet-Area Optimum, Wet-Area Firestop, dan Shaftwall Liner. [caption id="attachment_124834" align="aligncenter" width="680"] Papan gipsum (elkem.com)[/caption] Lalu, apa model gypsum Jayaboard yang tahan terhadap air? Anda dapat memakai tipe Jayaboard Wet-Area Optimum, sebuah papan gypsum Jayaboard Sheetrock yang dikembangkan khusus untuk pemasangan tile-backer dan plafon tahan lendut optimum. Produk ini diklaim tahan lendut optimal dan punya inovasi garis sekrup satu-satunya di Indonesia, cocok untuk partisi kamar mandi dan pada ruang-ruang yang lembap. Selain itu, Anda pun bisa memilih varian Jayaboard Wet-Area Firestop, sebuah papan gypsum yang dapat menahan kondisi lembap dalam ruangan hingga RH 95 persen sekaligus mendukung sistem tahan api. Sistem gypsum seperti ini diklaim sangat ideal digunakan pada ruangan yang cenderung lembap dan memerlukan performa ketahanan api. Tidak cuma itu, tipe ini juga dikatakan mendukung sistem partisi kedap suara dan tahan gempa. Tidak sulit mendapatkan gypsum Jayaboard yang tahan air. Pasalnya, Anda sudah bisa membelinya di banyak toko bahan bangunan terdekat. Jika masih kesulitan, Anda pun dapat menemukannya di sejumlah situs jual beli online dalam negeri. Biasanya hadir dalam ukuran ketebalan 9 mm, berikut harga gypsum Jayaboard water resistant di pasaran saat ini. Ukuran Gypsum Jayaboard Harga Gypsum Jayaboard Anti Air 9 mm Rp100.000 Rp137.500 per lembar Gypsum Jayaboard Anti Air 13 mm Rp162.000 Rp174.000 per lembar Daftar harga gypsum Jayaboard water resistant di atas sudah kami rangkum dari berbagai sumber, termasuk sejumlah toko bahan bangunan dan beberapa platform e-commerce. Perlu Anda catat bahwa harga gypsum Jayaboard anti air tersebut tidak mengikat dan dapat berubah sewaktu-waktu. Sayangnya, belum banyak toko yang menawarkan gypsum Jayaboard Wet-Area Firestop. Untuk memperoleh informasi lebih lengkap, Anda dapat menghubungi pihak produsen lewat situs resminya. [1] Noor, Gusti S. 2007. Pengaruh Variasi Berat Partikel terhadap Sifat Papan Gipsum. Jurnal Penelitian Hasil Hutan, Vol. 23(3): 266-272. Penulis: Anang Panca Tanggal: 2023-05-19 18:00:49 Kategori: Properti Tag: bahan bangunan, gipsum, interior, material, papan, partisi, plafon, ruangan, ukuran

What color is water resistant gypsum board. Is gyproc waterproof. Is gypsum plaster water resistant. Is gypsum board waterproof. Is gypsum waterproof. What is the face colour of water resistant gypsum. Gypsum water reaction. Can gypsum board get wet. Is gypsum board water resistant.