

# GYP-SPAN® Radiant CG

## COMMERCIAL GRADE FLOOR UNDERLAYMENT

 **Hacker Industries, Inc.**  
SUBMITTAL FORM

Technical Data	Properties	ASTM
Weight	15.6 lb/ft <sup>2</sup> (76.2 kg/m <sup>2</sup> ) at 1-1/2" (38 mm)	
Thickness	3/4" (19 mm) over top tubes; 1-1/2" (38 mm) total thickness	
Compressive Strength	2800 to 3800 psi (19.3 to 26.2 MPa)	C472 M
Thermal Performance	K-value of 4.35 BTU; R-value of 0.23 ft <sup>2</sup> •h•°F/BTU	C177
Fire Hazard Classification	Flamespread index 0; Fuel contribution 0; Smoke density 0	E84
Sand	1/8" (3 mm) or less washed plaster or masonry sand	E11

- Benefits**
- High-strength gypsum concrete for use over radiant heat systems
  - Contributes to excellent STC and IIC ratings
  - Efficient thermal mass for uniform heat distribution
  - Lightweight and crack-resistant
  - No hot spots, air bubbles or shrinkage cracks
  - Helps contribute points to LEED® project certification
  - Creates a flat, durable surface for finished floor coverings
  - Installed only by Licensed Applicators across North America

**Product Description** GYP-SPAN® Radiant Commercial Grade is specially formulated for use over hot water tubes or electric cables in radiant heat systems. The non-shrinking nature of GYP-SPAN® Radiant Commercial Grade helps to lock radiant heat tubes in place, preventing noise and chafing, and evenly distributing the heat throughout the subfloor. GYP-SPAN® Radiant Commercial Grade provides compressive strengths from 2800-3800 psi (19.3 to 26.2 MPa). Depending on compressive strength, it can be installed before or after drywall. GYP-SPAN® Radiant Commercial Grade accepts virtually all types of floor coverings, such as ceramic tile, carpeting and wood.

GYP-SPAN® Radiant is mixed on the job site with local sand (per ASTM E11) and water to create a lightweight slurry. Installed at a minimum of 3/4" (19 mm) thick above the top of the tubes (total thickness of 1-1/2" [38 mm]), the underlayment weighs approximately 15.6 lb/ft<sup>2</sup> (76.2 kg/m<sup>2</sup>) with a dry density range of 120-130 pcf.

For commercial projects, GYP-SPAN® Radiant Commercial Grade is a cost-efficient way to create a warm, flat, non-structural and high-strength surface for finished floor coverings.

- Limitations**
- Do not use GYP-SPAN® Radiant Commercial Grade in exterior locations, below grade, or where continuous exposure to moisture is likely.
  - Shall not be used as a wear surface; must be covered by a finished floor covering.
  - Structure shall be designed so that deflection does not exceed L/360 live or dead load. Certain floor coverings such as marble, limestone, travertine and wood may have more restrictive deflection limits.
  - If installed above a crawl space, subfloor must be protected by a vapor barrier.
  - No single application of GYP-SPAN® Radiant Commercial Grade shall exceed 3" in depth.
  - GYP-SPAN® Radiant Commercial Grade is but one component of an effective sound and fire control system. Care must be taken in the installation of all components to assure the ultimate design performance. Published acoustical and fire system tests were conducted under controlled laboratory or field conditions and reflect results applicable only to those specific assemblies.

**Installation** Before, during, and after the installation of GYP-SPAN® Radiant Commercial Grade, the building must be enclosed and the temperature maintained at a minimum of 50°F (10°C). Prior to the installation of GYP-SPAN® Radiant Commercial Grade, the subfloor shall be structurally sound (L/360) broom cleaned, dry and free from oil, grease, paraffin, laitance, wax or other contaminants. Concrete subfloors shall be 28 days or older. For on-grade applications over concrete, measure the Moisture Vapor Emission Rate (MVER) per ASTM F1869. MVER shall not exceed 3 lb/1000 ft<sup>2</sup> per 24 hours.

Prime wood subfloors per recommended specifications before installing underlayment.

**Installation cont.**

Adequate ventilation shall be provided by the General Contractor (GC) to ensure proper drying of GYP-SPAN® Radiant Commercial Grade. If necessary, the GC shall provide mechanical ventilation. Depending on thickness and drying conditions, the underlayment should dry within 10 to 14 days. To avoid potential problems during the drying process, the GC shall consult Hacker Industries, Inc.'s Drying Conditions Flyer and Hacker Industries, Inc.'s website for additional information concerning drying of this product.

After installation, temporary wood planking shall be placed by the GC wherever the floor underlayment will be subject to wheeled or concentrated loads.

Finished floor coverings can be installed when the GYP-SPAN® Radiant Commercial Grade is completely dry. Consult flooring contractor for recommended procedures to test for dryness and acceptable levels of moisture. Reference Hacker Industries, Inc.'s Guidelines for Installing Finished Floor Coverings. This guideline is not a warranty and shall be used as a guideline only. See ASTM F2419. For ceramic tile installations, a crack isolation membrane shall be used as recommended by setting material manufacturer.

**Product Data**

**Approximate Compressive Strength per ASTM C472 Modified:** 2800 to 3800 psi\* (19.3 to 26.2 MPa)  
**Approximate Dry Density (aggregated):** 120 to 130 pcf

\*Note: Compressive strengths published herein were achieved under controlled laboratory conditions. Actual field results may differ due to environmental conditions, regional sand variations, or inconsistent proportioning of field-applied water, sand and Hacker Floor Underlayment, as well as differences in mixing/pumping equipment.

**Compliance**

- ICC-ES ER-4147
- City of Los Angeles Research Report No. 24540
- FHA-HUD MR 1255
- Tile Council of North America (F180, F200, RH111, RH122)

**UL Designs**

G561	G565	G568	J917	J919	J920	J924	J927	J931	J957	J991	J994
L006	L201	L202	L206	L208	L209	L210	L211	L212	L501	L502	L503
L504	L505	L506	L507	L508	L509	L510	L511	L512	L513	L514	L515
L516	L517	L518	L519	L520	L521	L522	L523	L524	L525	L526	L527
L528	L529	L530	L532	L533	L534	L535	L536	L537	L538	L539	L540
L541	L542	L543	L545	L546	L547	L549	L550	L551	L552	L556	L557
L558	L563	L564	L569	L570	L571	L574	L576	L577	L579	L581	L583
L585	L588	L589	L590	L592	L593	L598	M500	M502	M503	M504	M505
M506	M508	M511	M513	M515	M517	M519					

**Related Products**

Hacker Floor Primer, Hacker TopCoat™ SP and Hacker Floor Sealer are available for use with GYP-SPAN® Radiant Commercial Grade. Contact Hacker Industries, Inc. at (800) 642-3455 for more information.

**Warranty**

Subject to express warranty stated on Hacker Industries, Inc.'s website.

**Submittal Approvals**

Project Name: \_\_\_\_\_

Contractor/Architect: \_\_\_\_\_

Date: \_\_\_\_\_

**PRODUCT INFORMATION**  
See [www.HackerIndustries.com](http://www.HackerIndustries.com) for current recommended product specifications and literature.

**WARNING**  
When mixed with water, this product hardens and becomes extremely hot. DO NOT attempt to make a cast enclosing any part of the body using this material. Failure to follow these instructions may cause severe burns that may require surgical removal of affected tissue or amputation of limb. Portland cement is strongly alkaline. Direct contact can be corrosive and cause severe damage or chemical

burns to eyes and wet, moist skin. Avoid contact with eyes and skin. Wear protective glasses and clothing. If eye contact occurs, immediately flush thoroughly with water for 30 minutes and seek medical advice. Inhalation of dust may be corrosive or cause chemical burns or irritation to nose, throat and respiratory tract.

Avoid breathing dust. Use a NIOSH/MSHA-approved dust respirator. Wash thoroughly with soap and water after use. Do not ingest. If ingested, call a physician. Product safety, call (800) 642-3455. KEEP OUT OF REACH OF CHILDREN.

**TRADEMARKS**  
FIRM-FILL®, GYP-SPAN®, Let Our Products Floor You™ and the associated logos are trademarks of Hacker Industries, Inc. LEED® is a registered trademark of the U.S. Green Building Council.

**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 instruction 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 30 days from date it was, or reasonably should have been, discovered.

**SAFETY FIRST**  
Follow good safety/industrial hygiene practices during installation. Wear appropriate personal protective equipment. Read specs, MSDS and literature prior to specification and installation.

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