RECOMMENDED SPECIFICATIONS

PART I: GENERAL

1.1 Scope

Specify to meet project requirements. The conditions of the Contract (General, Supplementary, and other conditions) and the General Requirements (sections of Division 1) govern the provisions of this section.

1.2 Qualifications

A. **Supplier:** Hacker Industries, Inc., Newport Beach, California

B. **Installer:** Installation of GYP-SPAN® Radiant shall be by a trained Licensed Applicator of Hacker Industries, Inc., using mixing and pumping equipment with a water meter approved by Hacker Industries, Inc.

C. All materials specified herein shall be approved by Hacker Industries, Inc., Newport Beach, CA. All others must receive prior approval.

D. Compressive strength can be specified from 2000-3200 psi (13.8 to 22.1 MPa).

E. Materials shall be delivered in their original, unopened packages and protected from exposure to the elements before and after delivery. Do not allow bags to get wet. Product shall not be used beyond shelf life.

F. **Certification:** Upon completion of this portion of the work, and as a condition of its acceptance, deliver to the architect a certificate from Hacker Industries, Inc., signed by the Licensed Applicator, stating that the material used in this work complies with the specified requirements.

PART II. PRODUCTS

2.1 Materials

A. **Gypsum Concrete:** GYP-SPAN® Radiant, as supplied by Hacker Industries, Inc.

B. **Subfloor Primer:** Hacker Floor Primer or approved equal

C. **Sand:** 1/8" (3 mm) or less washed plaster, masonry sand or silica sand meeting requirements of Hacker Industries, Inc. Sand Guidelines

D. **Water:** Potable and free from impurities

E. **Sealer:** Hacker TopCoat™ SP (if specified)

2.2 **Mix Design:** See section 3.3

PART III: PREPARATION

3.1 Condition of Subfloor

A. Subfloor shall be structurally sound (L/360), broom cleaned, dry and free from oil, grease, paraffin, laitance, wax or other contaminants before the arrival of the Hacker Licensed Applicator.

B. **Leak Prevention:** All cracks and voids should be filled with a quick-setting patching or taping compound, or equal, where leakage could occur.

C. Before installation, the General Contractor (GC) shall inspect and approve the condition of the subfloor and test the existing subfloor for moisture.

3.2 Priming

A. Prime wood subfloors with one coat of Hacker Floor Primer (diluted 4:1 with water) using one gallon of Hacker Floor Primer (3.78 L) per 500 ft^2 (47 m^2).

B. Hacker Floor Primer is not always required over concrete substrates. Multiple coats may be required over porous concrete or plank. The Hacker Licensed Applicator can give specific recommendations. (Note: For rehabilitation work or pours over old and/or porous concrete, consult a Licensed Applicator or Hacker Industries, Inc. for recommended preparation.)

3.3 Mixing Instructions

A. Add 80-pound (36.3 kg) bag of GYP-SPAN® Radiant to 6 to 7 gallons (22.7 to 26.5 L) of water followed by the specific sand ratio. Do not overwater. Water amount will vary with the wetness of the sand.

This is the proper sequence for mixing of GYP-SPAN® Radiant.

First add water to bucket followed by GYP-SPAN® Radiant and finally the sand.

3.4 Underlayment Application

A. Scheduling:

1. Installation of GYP-SPAN® Radiant shall not begin until the building is enclosed, including roof, windows, doors and other openings.
2. GYP-SPAN® Radiant may be installed before or after the installation of drywall.

B. Application:

1. The minimum thickness of GYP-SPAN® Radiant varies with the type of radiant tubing. Install the first lift (pour) to the top of the tubing or cable. After the first lift has set-up, install the second lift (pour) 3/4" (19 mm) above the first lift. The minimum thickness of GYP-SPAN® Radiant is 3/4" (19 mm) over the top of the tubes or cables.
2. Install GYP-SPAN® Radiant at specified thickness by placing contents of bags, sand and water into the approved high-speed mixing device and blending for a minimum of one minute. GYP-SPAN® Radiant shall be pumped onto floor areas, spreading and screeding to a smooth surface. Place as continuously as possible until installation is complete so that no GYP-SPAN® Radiant slurry is placed against GYP-SPAN® Radiant that has obtained its initial set, except at authorized joints.
3. GYP-SPAN® Radiant is suitable for interior applications only and must be covered by a finished floor covering.

C. Protection: After installation, temporary wood planking shall be placed by the GC wherever the floor underlayment will be subjected to wheeled or concentrated loads. The GC shall not place concentrated loads—such as pallets of material, drywall, taping compounds or any heavy items which may cause deflection—in the middle of the floor or in hallways.

D. **Drying:** Before, during and after installation of GYP-SPAN® Radiant, building interior shall be ventilated and heated to a minimum 50°F (10°C) to assure completion of the drying process. The GC shall provide continuous ventilation and adequate heat to rapidly remove moisture from the area until the GYP-SPAN® Radiant is dry. If necessary, the GC shall provide mechanical ventilation. Do not install finished floor coverings until the GYP-SPAN® Radiant is tested for dryness. Consult flooring contractor for recommended procedures to test for dryness and acceptable levels of moisture. To avoid potential problems during the drying process, the GC shall consult Hacker Industries, Inc.'s Drying Conditions Flyer and information contained on Hacker Industries, Inc.'s website for additional information concerning drying of this product.

3.5 Preparation For Installation of Floor Coverings

A. **Sealing:** Any areas where the underlayment surface has been damaged shall be cleaned and sealed regardless of floor covering specified. Floor covering manufacturers' specifications and requirements supercede these recommendations.

B. For ceramic tile installations, a crack isolation membrane shall be used as recommended by setting material manufacturer for intended use or application. Reference TCNA.

C. **Floor Covering Procedures:** Please see Hacker Industries, Inc.'s Guidelines for Installing Finished Floor Coverings. The guideline is not a warranty and should be used as a guideline only.

3.6 Field Quality Control

A. **Slump Test:** GYP-SPAN® Radiant shall be tested for slump at the beginning of each installation in order to establish the required slump. Slump tests shall then be taken periodically during installation to verify that the required slump is maintained. Slump tests shall be conducted using a 2" by 4" (51 mm by 102 mm) cylinder. The acceptable patty size shall be 7-1/2" (191 mm) plus or minus 1/2" (13 mm) in diameter.

B. **Field Samples:** Testing shall be done in accordance with ASTM modified C472 testing procedures, using split brass molds. Prior to independent testing, consult Hacker Industries, Inc. for proper ASTM procedures.

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