

## SECTION 03540

RECOMMENDED SPECIFICATION FOR  
**SCHÖNOX AP SYNTHETIC GYPSUM SELF LEVELING UNDERLAYMENT COMPOUND**  
FOR CRITICAL SUBSTRATES SUCH AS:  
GYPSUM, WOOD, CERAMIC, TERRAZZO, SHEET VINYL, OSB BOARD AND PLYWOOD

### PART 1 – GENERAL

#### 1.01 SUMMARY

- A. This is the recommended specification for **Schönox AP Synthetic Gypsum Self Leveling Compound** designed for renovation work for leveling substrates such as; gypsum, wood, existing ceramic, terrazzo, sheet vinyl, OSB board, and plywood above grade. Once mixed with water, it can be pumped or poured and provides a smooth, hard flat surface.

#### 1.02 SECTION INCLUDES

- A. **Schönox AP**- Synthetic Gypsum Self Leveling Underlayment
- B. **Schönox VD**-Primer for porous substrates
- C. **Schönox SHP**-Primer for non-porous substrates
- D. **Schönox Kh Fix** - Primer for gypsum based substrates
- E. **Schönox AST**-Synthetic Feather Edging Material

#### 1.03 REFERENCES

- A. ASTM C109 Standard Test Method for Compressive Strength 5800 PSI at 28 days
- B. ASTM C348 Flexural Strength 1400 PSI at 28 days
- C. ASTM C1583 Tensile Strength 400 PSI after 3 days
- D. ASTM C191 Initial and Final Set, approx. 160-200 minutes
- E. ASTM E84 Flame Spread 0; Smoke Development 0
- F. LEED

1. EQc2 Low Emitting Materials
2. MR Credit 1.1- Maintain existing Walls, Floors and Roof
3. MR Credit 1.2- Existing Interior Non Structural Elements
4. MRc3-Environmentally Preferable Products

#### **1.04 ADMINISTRATIVE REQUIREMENTS**

Coordination: Coordinate work of this Section with work of other trades for proper time and sequence to avoid construction delays.

- A. Pre-installation Meetings: Conduct pre-installation meeting prior to commencing to verify project requirements, substrate conditions and coordination with other building sub-trades, and to review manufacturer's installation instructions and manufacturer's warranty requirements.
- B. Sequencing: Base on manufacturer's written recommendations for sequencing construction operations
- C. Scheduling

#### **1.05 ACTION SUBMITTALS**

- A. General: Submit listed submittals in accordance with Contract Conditions and Section.
- B. Product Data: Submit specified products as follows:
  - Manufacturer's product data, including manufacturer's SPEC-DATA product sheet.
  - Manufacturer's installation instructions.
  - Catalog pages illustrating products to be incorporated into project.
    1. Material Safety Data Sheets (MSDS).

#### **1.06 QUALITY ASSURANCE**

- A. Qualifications:
  1. Manufacturer: HPS North America, **Schönox**
- B. Having 20 years experience manufacturing components similar to or exceeding requirements of project.
- C. Having sufficient capacity to produce and deliver required materials without causing delay in work.
  1. Installer:
- D. Acceptable to the manufacturer, experienced in performing work of this

section and specialized in installation of work similar to that required for this project. INSTALL certified or equal.

E. Installation

1. Underlayment shall be installed from 1/16" to 1" without aggregates and layer thickness up to 2" with aggregates.
2. Underlayments shall develop a compressive strength of 5800 psi per ASTM C109/mod (air cure only) and a flexural strength of 1400 psi per ASTM C348.
3. Underlayment shall be ready for foot traffic after approximately 2 hours and be ready to receive floor covering after approximately 16 hours, up to 1/8" layer thickness.

### 1.07 WARRANTY

- F. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and does not limit, other rights Owner may have under other Contract Documents.
1. Warranty Term: **Schönox AP** carries a standard 10 year warranty.

### 1.08 DELIVERY, STORAGE AND HANDLING

- A. General requirements: Materials shall be delivered in their original, unopened packages and protected from the elements. Avoid extreme hot or cold, direct sunlight and moisture. Damaged materials shall be removed from the job site.

### 1.09 SITE CONDITIONS

- A. **Schönox AP** IS A "**SYNTHETIC GYPSUM**" material.
- B. All slabs on or below grade must be known to have an intact vapor retarder directly beneath the concrete in accordance to the relevant standards. Do not install below 41° F surface temperature. Install quickly if floor is warm. Never mix with cement or additives other than **Schönox** approved products.

## PART 2-PRODUCTS

### 2.01 MATERIALS

- A. The "Synthetic Gypsum" based leveling underlayment shall be **Schönox AP**.

- B. The Primer for standard porous substrates shall be **Schönox VD**.
- C. The primer for non-porous substrates shall be **Schönox SHP**.
- D. The primer for over gypsum substrates shall be **Schönox KH Fix**
- E. Repair of small holes and indentations can be done with **Schönox AST**.

## 2.02 MIX DESIGNS

- A. Mixing ratios: **Schönox AP** 55 lb bag with 6.3 quarts or 6.0 liters of water. Product shall be mixed in a clean mixing drum. Add **Schönox AP** to cold clean water to form a homogenous mixture. Use of a heavy-duty drill (min 600 rpm) is recommended to obtain a lump-free mix, mix for 3 minutes. **DO NOT OVER WATER!** Follow written instructions per Schönox AP bag label or product data sheets.
- B. When extended with aggregates at layer thickness of 3/8"-2" add aggregates last. Approx. 65wt% clean silica sand (0.1-3.0mm). **DO NOT OVER WATER!** Foam while mixing or settling of the sand aggregate while placing indicates overwatering. Follow written instructions per **Schönox AP** bag label or product data sheets.
- C. For pump installations **Schönox AP** shall be mixed using an automatic mixing pump. Start the pump and adjust to the minimum water reading that still allows self-leveling properties. **DO NOT OVER WATER!** Check the consistency of the product on the floor to ensure a homogeneous mixture of the pour. If settling is occurring, reduce the water amount and recheck. Conditions during the installation, such as variation in water, powder, substrate and ambient temperature, require that the water setting be monitored and adjusted carefully to avoid overwatering.

## PART 3-EXECUTION

### 3.01 PREPARATION

- A. Subfloors must be smooth, sound, clean, dry and free of any contaminants which may hinder adhesion. All subfloors must be solid, sound and primed properly. Any loose areas must be mechanically removed back to a sound base and substrate repaired with **Schönox** repair compounds as required.

- B. Subfloors shall be inspected and corrected for moisture and any other condition that could affect the performance of the underlayment or finished floor covering. This product is not a vapor barrier and will allow free passage of moisture. Follow the directives of the floor manufacturer regarding maximum allowable substrate moisture content and test the substrate prior to installing **Schönox AP**. Where substrate moisture exceeds the maximum allowed then an application of **Schönox SDG**, **Schönox MR18** or **Schönox EPA** may be used to suppress residual moisture (see data sheet). **Schönox SDG** is suitable for cement based substrates with residual moisture up to 93% RH or 12 lbs., **Schönox MR18 is suitable for cement based substrates with residual moisture up to 96% RH or 18 lbs.** and **Schönox EPA** is suitable for cement based substrates with residual moisture up to 100% RH or 25 lbs.
- C. Gypsum substrates should always be dry. Do not use damp proof membranes on gypsum substrates.
- D. Old water-soluble adhesives should be removed completely; old water resistant adhesives should be mechanically removed as far as possible. The complete mechanical removal of cutback (i.e. grinding or sanding) can be hazardous as old cut-back adhesives may contain asbestos. Consult with government agencies for removal of flooring adhesives that contain asbestos. Prime remaining adhesive residues accordingly.
- E. Old floors such as ceramic tiles should be thoroughly cleaned and abraded.
- F. All cracks and non moving joints in the subfloor shall be repaired.
- G. It is the responsibility of the flooring contractor to ensure that the subfloor is thoroughly clean and properly anchored prior to the installation of any **Schönox** products.

## B. PRIMING

- 1. Initial priming on standard absorbent substrates such as; cement or concrete
  - A. **Schönox VD** is stirred or shaken before use. Apply **Schönox VD** avoiding puddles using a suitable tool such as; a roller, paintbrush, or push broom. **Schönox VD** can be sprayed when mixing 1:1 or more. Mix **Schönox VD** (1:3 with water). A second application is recommended on strong absorbent substrates. Waiting time is approximately 10 minutes on cementitious substrates.
- 2. Priming on non-absorbent, smooth, sound substrates.

- A. **Schönox SHP** is stirred or shaken before use. Apply **Schönox SHP** avoiding puddles using a suitable tool such as; a roller, paintbrush or short-pile roller or pad. Apply undiluted. Drying time is about 1-2 hours before underlayment's can be installed.
- 3. Priming Gypsum Substrates (sanded and vacuumed)
  - A. Apply **Schönox KH Fix**, undiluted.
- 4. Priming on wooden substrates such as; OSB Board, Plywood (APA Grade)
  - A. **Schönox VD** is stirred or shaken before use. Apply **Schönox VD** (undiluted) avoiding puddles using a suitable tool such as; a roller, paintbrush, or push broom. Drying time is about 2 hours.

### **3.02 APPLICATION OF UNDERLAYMENT**

- A. Pour or pump the **Schönox AP** and spread using a smoothing trowel. Even surfaces are easily achieved using a pin leveler. In higher thicknesses using a spike roller is recommended. Underlayment can be walked on after two hours.
- B. If a second layer of leveling compound is to be applied, prime the first layer with **Schönox VD** (diluted 1:1 with water) after drying. The maximum layer thickness must not exceed the layer thickness of the first layer.

### **3.03 PREPARATION FOR FLOORING INSTALLATION**

- A. Underlayment can accept finished floor covering materials after approximately 16 hours for layer thickness up to 1/8". See manufacturer's recommendations for subfloor requirements.

### **3.04 PROTECTION**

- A. Prior to installation of the finished flooring, the surface of the underlayment shall be protected from abuse by other trades by use of plywood, Masonite or other suitable protection.

**END OF SECTION**