



ALLIED CUSTOM GYPSUM

Submittal Sheet

AccuLevel® SD30

Gypsum Underlayment for Corrugated Steel Construction Assemblies

- Formulated and tested specifically for applications involving fire-rated corrugated steel deck construction.
- Lighter and thinner than concrete: AccuLevel® SD30 can be poured as thin as 1" over the top of the fluting in the corrugated deck, and weighs as little as 12.8 lb per square foot (over a 9/16" fluted deck).
- Unique formulation with enhanced performance characteristics to deliver a dense, smooth, high compressive strength substrate suitable for a wide array of floor coverings.
- Installed by a network of licensed contractors.
- Mixed on site with approved sands to deliver compressive strengths from 3,000-4,500 psi.
- Self sealing and low porosity formulation enables direct-bonded floor coverings, in many cases without the use of a surface sealer.
- Suitable for sheet goods, VCT, tile and stone, wood, or carpet.
- Fast setting, quick application, means floors are returned to service the following day. Ready for light trade traffic within hours and normal trade traffic within 24 hours.
- Approved for use with AccuQuiet® Sound Deadening Mats. Contact an AccuLevel® technical representative for details.
- Approved for use with hydronic heating systems for radiant floor heating over corrugated galvanized steel deck construction assemblies.

Description and Benefits

AccuLevel® SD30 is a premium polymer and portland cement modified gypsum based underlayment. With high flow character, the product is pumpable and fast applied without the need for troweling, and is designed to deliver a smooth monolithic surface over corrugated steel construction assemblies. Thinner and lighter than conventional concrete, AccuLevel® SD30 removes weight from the construction assembly, thereby reducing the overall cost of structural reinforcement. With mix designs offering minimum compressive strengths from 3,000-4,500 psi, AccuLevel® SD30 delivers a hard smooth surface suitable for a vast array of floor covering options.

Uses and Limitations

- Minimum Steel Deck Standards: Minimum 22 guage galvanized steel deck with minimum flute depth of 9/16
- Deflection Limits of the Structure: Live and dead loads considered, L/240 minimum. Dead loads only, L/360. Deflection limits of the decking material: L/480. More restrictive deflection limits may be required by some types of floor goods. Contact the floor covering manufacturer for minimum specifications.
- Minimum Assembly Construction Criteria: Reference the Underwriters Laboratories Fire Resistance Directory for a full description of minimum criteria for each individual fire rated design.
- When used with hydronic heating systems, AccuLevel® SD30 must be poured to a thickness of ¾" above the top of the tubing or 1" above the top of the flutes in the metal deck, whichever is greater.
- Curing and Drying time before application of floor goods depends on thickness, humidity and ventilation conditions. At an average thickness of 1.25", AccuLevel® SD30 can typically be covered in 10-14 days. Thicker pours, humid conditions, and pour ventilation will require more extended drying times.

Uses and Limitations (cont.)

- AccuLevel® SD30 is for interior use only and should not be used in areas where extended or repetitive exposure to moisture is anticipated unless protected by a waterproofing system.
- AccuLevel® SD30 is permeable to moisture vapor. In cases where moisture vapor drive is anticipated, such as over a crawl space or below grade, a moisture vapor barrier is recommended.
- AccuLevel® SD30 is approved for pedestrian foot traffic and light rubber wheeled traffic.
- AccuLevel® SD30 is not a structural cement and will crack where excess substrate deflection or dynamic loads that exceed the deflection limit of the substrate. Additional reinforcement is recommended where high dynamic loading is anticipated.
- AccuLevel® SD30 should not be used to bridge moving cracks or expansion joints. All joints must be honored through to the substrate.
- AccuLevel® SD30 is not a wear surface.
- Finished floor covering manufacturer recommendations supersede all others.

Contact

- Contact an AccuLevel® technical representative with any questions or for more details about the use of this or other AccuLevel® products and systems. (800)-624-5963 or visit www.accucrete.com

Preparation

- The interior of the building must be enclosed, protected from sun and wind, and a minimum temperature of 50°F must be maintained during the installation and for a period of seventy-two (72) hours after the installation of the AccuLevel® SD30.
- The substrate must be indoor, clean, dust and contaminant free. Any loose or weak material present on substrate must be mechanically removed.
- AccuLevel® SD30 is highly flowable. The perimeter, mechanical and plumbing penetrations, and other gaps in the substrate must be sealed to prevent leaks.
- Prior to pouring AccuLevel® SD30, an approved priming system for galvanized steel must be used. Consult an AccuLevel® technical representative on the proper priming system.

Mixing and Placement

- Wear a NIOSH/OSHA approved dusk mask and/or provide ventilation when mixing the product.
- Add powder to water at a mixing ratio of 3.5-4.5 gallons of water and 0.80 - 1.40 ft³ of washed sands (that meet minimum AccuLevel®/AccuCrete® gradation criteria) per 80 lb bag. This mix ratio should yield a slump of 8-10" when using a 2"x 4" section of PVC over a smooth plastic or glass sheet. Higher slumps will affect the final compressive strength, and for this reason the smallest slump possible to achieve the desired surface finish should be employed.



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Mixing and Placement (cont.)

- If after placement the product is not smooth and lump free, extended mix times with slightly more water (within the specified range) may be required. If separation or surface bleed occurs, reduce the water quantity to form a smooth, homogenous, flowable consistency.
- A working time of approximately 15 minutes should be anticipated but will vary with temperature, humidity, and mixing consistency.
- Do not attempt to re-temper the mix once it begins to thicken.
- Using a guage rake and underlayment smoothing tool, work the material to the desired thickness and smooth the surface to remove as many remaining imperfections as possible.

Curing

- Do not allow foot traffic until the product is fully hardened, usually within 4 hours of placement.
- AccuLevel® SD30 is self-curing and does not require curing compounds, but should be protected from excessive draft for the first 24 hours. After this time, ventilate the area to expedite the curing process and to aid in the removal of excess moisture from the building. In general, a thickness of 1.25" requires 10-14 days to fully cure and dry. These times will vary with humidity, temperature, and ventilation conditions.

Preparation for Floor Coverings

- For moisture sensitive floor coverings, test the underlayment prior to installation by the plastic sheet method per ASTM D-4263. If visible signs of moisture are present, then more curing time is required. Do not test AccuLevel® SD30 for dryness using the calcium chloride method, ASTM F-1869, as inaccurate results will occur.
- After the underlayment has dried, remove any loose debris and foreign material. For tile and stone installations, a water proofing and crack isolation membrane is recommended but not required. For portland cement based adhesives, a floor sealer is recommended. Water-based adhesives will generally not require a floor sealer unless the porosity of the underlayment does not allow sufficient working time. Solvent based, or moisture cured urethanes do not normally require (and are normally not compatible with) a surface sealer. In applications where the floor goods manufacturer differs from these recommendations, the floor goods manufacturers' recommendations will supersede all others. Consult an AccuLevel® technical representative for additional details.

Physical Properties

Color: grey powder
Flow properties: high flow with self-leveling properties
Water Per bag: 3.5-4.5 US Gal./ 80 lb, depending on desired slump and sand moisture content
Sand per bag: 0.80 – 1.40 ft³ of washed mason or concrete sands meeting AccuLevel®/AccuCrete® minimum gradation criteria
Compressive Strength (ASTM C472): 3,000 – 4,500 psi, depending on mix design, sand gradation, and water content
Dry Density: 115-125 lb/ ft³

UL Designs

G577, G578, G579, G580, G581, G582. Additional designs may be available. Contact an AccuLevel® technical representative for the most current fire rated design information.

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