

Surfacing Systems for Insulating Concrete Forms

Weather resistant surfacing system using a mesh-reinforced base coat and 100% acrylic polymer exterior finish

DESCRIPTION

Senergy Surfacing Systems for ICFs provide the desirable stucco look and aesthetic appeal over a variety of expanded polystyrene insulating forms. The Senergy Surfacing Systems are comprised of a reinforced base coat, optional primer and a 100% acrylic polymer finish. Depending upon the construction and composition of the form, the Senergy Surfacing Systems might include additional expanded polystyrene insulation boards and an adhesive.

Senergy architectural coatings and finishes have passed rigorous tests for resistance against abrasion, fading, chalking, cracking and peeling. Finishes are available in a limitless color selection and offer performance enhancement options including increased resistance to dirt pick-up and mildew. Senergy Surfacing Systems feature exceptional durability and low maintenance.

USES

For exterior walls in residential, commercial and institutional ICF construction when a weather resistant, low maintenance "Stucco Look" wall finish is desired.

ADVANTAGES

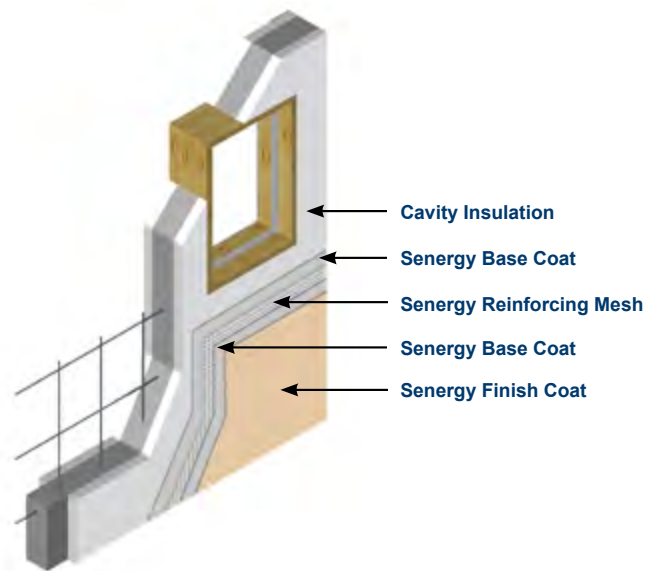
- Insulation and thermal mass of ICFs reduce energy cost
- Economical architectural detailing
- Does not require control joints
- Fade-, crack-, abrasion- and dirt-resistant finishes
- Multiple options for impact resistance improve functional design, ease of maintenance
- Wide selection of standard colors, custom colors, and finish textures

DESIGN CONSIDERATIONS

General

Consult the ICF manufacturer for design and application considerations.

- Density of the forms shall not exceed two pounds per cubic ft.
- Surfacing Systems shall not serve as the foundation damp-proofing.



- Use high impact mesh for ground floor applications in high traffic areas.
- EPS special shapes such as moldings, cornices, quoins, ogees, etc. can be used to enhance design aesthetics. These can be integrated into the Surfacing System. They must be reinforced with Senergy Base Coat and Reinforcing Mesh prior to application of the Tinted Primer and Finish.
- (Optional) EPS board size is limited to 2' x 4'. The minimum thickness of EPS at any point on the wall can not be less than 3/4". Consider this when designing and installing reveals.

Sealants, Backer Rod, Flashing

- Approved sealant installed with approved backer rod or bond breaker tape shall be used at all transitions between ICF and other elements such as windows, doors, vents, penetrations, transitions to dissimilar elements, etc.
- Flashing at windows, doors, chimneys, transitions between walls and roof and at other points specified shall be installed in accordance with component manufacturer's instructions.

BEST PRACTICES FOR INSTALLERS

General

- Do not run Surfacing Systems below grade; Surfacing Systems must terminate a minimum of eight inches above grade.
- Pail components must be kept at a minimum of 4°C (40°F) during shipping and storage. A minimum temperature of 4°C (40°F) is required during application of all components and until completely dried.
- Protect dry (bagged) products from moisture. EPS insulation boards should be stored flat, out of direct sunlight.
- No additives are permitted to any components.
- Repair any dings, dents and damaged form areas with the appropriate expanded insulation prior to the application of the Surfacing Systems.

Do not fill damaged areas with base coat or cementitious products.

- Do not apply the Surfacing Systems directly to dimensional framing lumber/ blocking which might occur at window and door bucks, etc.
- Install the Surfacing Systems after the concrete has been cured for a minimum of seven (7) days.
- Follow the application instructions for each component.
- All substrates must be clean, dry and sound without planar irregularities greater than 1/4" in 10'.
- Form ties, furring strips, or other materials external of the form shall be flush and planar with the surface of the form. Forms with exposed ties will require the use of installation board over the forms.
- Prior to installation of the base coat, entire wall must be completely rasped to remove high and low spots and to remove dust from the surface of the EPS.

Insulation Boards

Adhesion Valuation: If EPS insulation board is required over forms, evaluate adhesion prior to start of project as follows:

- Using the appropriate Senergy adhesive/base coat, apply a 3/4" thick x 3" x 3" sample of expanded polystyrene insulation board to the ICF on representative area(s) of forms including ties/furring strips.
- Allow the sample(s) to cure for a minimum of three (3) days prior to evaluation.
- Commercially available tensile test equipment such as the Comten Model 302N (813-823-7806) is available to remove and determine adhesion of the sample to the substrate. Remove the insulation board from the ICF and observe failure mode.
- The failure must occur cohesively within the expanded polystyrene insulation board sample for adhesion to be deemed acceptable.

EPS SHAPES AND REVEALS:

- EPS board size is limited to 2' x 4'. The thickness of the board must be 3/4" to 4".
- Do not break Reinforcing Mesh in reveals; offset 4–6" minimum. Do not align reveals with insulation board joints; offset 4–6" minimum.
- To avoid waste or insufficient adhesion, use the proper sized notched trowel to apply adhesive to back of insulation boards.

Reinforced Base Coat

- Reinforcing Mesh Flexguard 4/Intermediate 6/Intermediate 12 mesh must overlap a minimum of 2 1/2".
- Use Strong 15/Hi-Impact 20 at ground floor and on other locations where high traffic is expected. Strong 15/Hi-Impact 20 must not overlap; butt edges together. After Strong 15/Hi-Impact 20 are embedded in base coat, that layer must be covered by a second layer of Reinforcing Mesh 4 and base coat.
- Install "butterflies" of Reinforcing Mesh at corners of all windows, doors and other penetrations.
- Install a second layer of Reinforcing Mesh a minimum of 4" on both sides of inside and outside corners.
- Mesh color or prominent mesh pattern should never be visible through the base coat.
- Special shapes must also be reinforced with base coat and Reinforcing Mesh.
- Textured Acrylic Surfacing Systems are not designed for horizontal applications. Always maintain a minimum slope of 1:2 up to a maximum width of 12".
- Protect work from precipitation for a minimum of 24 hours.

Finish

- Use only stainless steel trowels.
- Avoid working in direct sunlight.
- Finishes should be applied with adequate man power, tools and staging to keep a wet edge.
- A primer tinted to the color of the finish is recommended prior to application of rilled finishes.
- Do not run finish into joints.
- Do not quit in the middle of a wall; run to natural breaks.
- Do not use different batches of finish on the same elevation.
- Protect from precipitation for a minimum of 24 hours.
- Use only sealants that are acceptable for use with this system. Acceptable sealants and backer rods or bond breakers must be installed at all transitions between this system and other wall assembly elements such as windows, doors, vents, transitions to dissimilar materials, A/C cases, and other penetrations.
- Do not apply finish over sealants.

KEY UPGRADES AVAILABLE

System upgrades can include the addition of high-impact resistant reinforcing mesh, specialty finishes, silicone enhanced textured finishes to improve dirt pick up and mildew resistance, and tinted primers to enhance final aesthetics.

SPECIFICATIONS & DETAILS

The contents of this system overview are intended to provide the design professional information required to evaluate this assembly against specific project requirements. Further useful information to support the creation of a project manual such as a guide specification, product bulletins, and assembly details are available on the Senergy website at senergy.master-builders-solutions.com/en.

TECHNICAL SUPPORT

For answers to questions or specific recommendations about this assembly, please consult our website at senergy.master-builders-solutions.com/en or contact our Technical Services Department: Toll-free 800-589-1336.

HEALTH & SAFETY

Follow good safety and industrial hygiene practices during handling and installing products and systems. Take necessary precautions and wear the appropriate personal protective equipment as needed. Read material safety data sheets and related literature on products before specification and/or installation.

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