SMaRT™ Solutions
Senergy Maintenance and Restoration Technology
Buildings are complex systems that incorporate a wide range of specialized materials and systems. As they age, they need care and maintenance to ensure that these systems work together to provide the expected level of performance. Early maintenance typically involves cleaning and inspection. Older buildings may need minor repairs. At some point, most buildings will require major renovation.

BASF Construction Chemicals provides a wide range of restoration solutions, from concrete strengthening and repair to waterproofing and comprehensive building envelope restoration. The SMaRT program is designed to lever the extensive resources that BASF provides, with a focus on the building enclosure.

While restoration has typically focused on prevention and remediation of damage created by water intrusion, the challenges and opportunities provided by 21st century restoration have become much more extensive. Restored buildings need to look impressive, manage heat, air and moisture effectively, function with existing structural elements, and do so in a cost-effective manner.

At the heart of the SMaRT program is the unparalleled efficiency of Senergy insulated wall systems. These durable and attractive claddings are in service today on thousands of buildings, in many cases for more than 40 years. Their combination of light weight and a high allowable deflection ratio minimizes demands placed on existing structures.

Senergy insulated wall systems provide up to R-45 continuous exterior insulation and a fluid-applied air/water-resistive barrier, for thermal efficiency and moisture management. The exterior skin can be engineered to provide extreme levels of impact strength. Resistance to hurricane-force winds is a readily-attained option.

Once performance has been restored to peak efficiency, final building appearance is a key determinant of the rent it commands, as well as its market value. Senergy CHROMA™ finishes give design professionals flexibility to utilize bright, vibrant, fade-resistant colors. TERSUS™ coatings provide hydrophobic exteriors that repel dirt and help buildings stay clean. The SMaRT program helps a reconditioned building look great and perform efficiently.

Building restoration is always a financial exercise. To drive transformation of existing buildings and regentrify our cities, the numbers have to work. The SMaRT program offers comprehensive solutions that are affordable and easy to implement. So your project can move from spreadsheet to design studio to completion quickly and effectively.

On the cover: Senergy Channeled Adhesive Design overclad of existing brick wall. The result is a refreshed exterior appearance backed by continuous insulation and an air/water-resistive barrier.
Textured finishes create new options for a refreshed building appearance.
Cleaning, Inspection and Data Collecting

The best looking buildings are clean. And the best water-related building issues are the ones that are prevented. Annual cleaning and inspection of buildings can pay big dividends.

In addition to looking good, a freshly cleaned building is ready for inspection and minor repairs. Regular inspection allows facility managers to maintain records of changes that progressively occur in the building enclosure, so that potential problems can be identified and corrected before they become acute.

Whether a building is one year old or 100 years old, cleaning and inspection is the beginning of an effective maintenance program, and the most efficient entry into the SMaRT program.

See SMaRT EIFS / Stucco Procedures RES 100 and 101.
Minor Repairs and Refreshed Appearance

Wear and damage to the building envelope is most acute when it leads to moisture intrusion. Replacing sealants and repairing damaged claddings can eliminate the need for the expensive remediation necessary after substantial damage has occurred.

Minor repairs are an opportunity as well as an expense. Application of a skim coat with fiberglass reinforcement over an existing EIFS or stucco cladding allows the building to be refinished. This can refresh the exterior appearance, and facilitate repurposing a building for new tenants. Senergy acrylic finishes are available in a wide range of textures and colors. Customized shapes can be added to further enhance a refreshed building façade.

BASF provides a number of additional solutions for refreshing building appearance. CHROMA™ finishes provide bright, vibrant, fade-resistant colors. TERSUS™ hydrophobic coating technology repels dirt and helps building maintain their just-cleaned appearance. Custom colored MASTERSEAL™ sealants can be used to accent and enhance visual appeal.

Dramatic changes to the appearance of a building can be accomplished quickly and inexpensively with Senergy systems. Resurfacing with Senergy technology can be an attractive part of a building repurposing strategy.

See SMaRT EIFS / Stucco Procedures RES 200, 201, 300, 301, 302, 303 400, 401, 500, and 600.
Recladding Existing Façades

Recladding is typically part of an overall plan to address multiple issues with an existing building. Moisture damage, poor indoor air quality (IAQ), diminished occupant comfort, degraded exterior appearance and high operating costs can come together to create both a need and a justification for building renewal. Investment in building restoration can provide rapid project payback, particularly when buildings are repurposed to higher value uses.

In many cases, Senergy insulated wall systems can be applied directly on top of an existing cladding. When it is necessary to remove existing cladding, Senergy wall systems can be applied to an existing or refurbished base wall. In all cases, the light weight and high allowable deflection of Senergy wall systems provide design flexibility by minimizing demands placed on existing structures.

Improved occupant comfort is one of many benefits of recladding with Senergy insulated wall systems. A fluid-applied SENERSHIELD air/water-resistive barrier system can be used to control air movement through the building enclosure, and reduce interior pressure differentials that create drafts and odor migration.

Air that passes through the building enclosure in an uncontrolled manner brings humidity with it, potentially leading to condensation and associated mold formation and/or water-related damage. By sealing the building enclosure and creating a drainage plane, a SENERSHIELD air/water-resistive barrier system can improve indoor air quality and extend building longevity.

Continuous exterior insulation also provides substantial benefits. By eliminating thermal bridging, the thermal efficiency of the structure can be substantially improved. Exterior insulation also moves the dew point of the building enclosure outward, so that condensation can be managed by the SENERSHIELD air/water-resistive barrier system. Thermal cycling and associated movements of building structural elements are also reduced by continuous exterior insulation.

Dramatic improvement in exterior appearance provided by SENERGY specialty finishes can take building restoration to the next level. The end result can be a sustainable improvement in building performance, transition to higher value building uses, dramatically improved building service life, and an outstanding return on the capital employed in the restoration process. See SMaRT EIFS / Stucco Procedures RES 600

Contact your local Senergy distributor or Senergy Technical Service Manager for help getting your SMaRT program started. For more information, call 1-800-589-1336 or email SMaRT@basf.com.
Senerflex Channeled Adhesive Design

Senerflex Channeled Adhesive Design is Senergy’s workhorse wall system because it is simple and highly effective. Rigid EPS continuous insulation is adhesively fastened to a SENERSHIELD Air/Water-Resistive barrier. Adhesive fastening means that the air/water-resistive barrier is not punctured by mechanical fasteners, and there is no thermal bridging through the continuous exterior insulation.

Vertical ribbons of adhesive create a secondary drainage plane, and provides very high wind load resistance. The exterior skin can be made strong enough to pass the Miami-Dade Large Missile Impact test, and can be finished in a wide range of textures and colors.

Senerflex Adhered Mat Design

Adhered Mat Design provides a solution to more specialized requirements. After the air/water-resistive barrier has been installed, mechanical fasteners attach a metal or fiberglass lath directly to framing, and provide supplementary attachment to underlying sheathing. Exterior insulation is adhesively fastened to the lath. Adhered Mat Design provides a solution where existing substrates are questionable and where very high wind loads are a design consideration.

Adhesive fastening of insulation eliminates thermal bridging across the exterior insulation. The exterior lamina can be made as strong as needed, and Senergy finishes offer a wide range of appearances.

Senturion

Senturion EIFS are mechanically fastened, and are typically used on low-rise construction where adhesive fastening is not practical, and high wind loading is not a consideration. As with all Senergy EIFS, the exterior lamina can be designed to have as much strength as needed, and the full line of Senergy finishes provides a wide range of design options.