Case History

Project Name: EM WALL Insulated Foam Core
Location: California
Type of Project: Polyurethane Foam Insulation
Specification: GacoPolyFoam CF-200

Customer: Integrated Structures, Inc.
Problem to be Solved: A unique polyurethane foam and foam installation process is required to create the EM WALL’s insulated foam core.
GacoPolyFoam Provides R-100 Insulation Value for Innovative EM WALL

**SITUATION:** Integrated Structures, Inc. offers turn-key solutions for architecture, engineering and construction, with an emphasis on innovative thinking.

One of the company's innovations is the EM WALL Energy Mass Wall System, a construction system comprised of an R-100 insulated foam core encased in two 3” concrete shells, creating a structural, load bearing wall that exceeds all existing earthquake codes and has a 4-hour fire rating.

The insulated core conserves energy by reducing the speed of heat transfer through the wall, and the concrete shells store thermal energy for release at a later time. The EM WALL allows a building to use a fraction of the energy that would be used if constructed using traditional methods.

A unique polyurethane foam and foam installation process is required to create the EM WALL's insulated foam core.

**SOLUTION:** To meet their construction needs, Integrated Structures selected GacoPolyFoam CF-200, a low density, ridged closed-cell foam.

**UNIQUE CHARACTERISTICS:** GacoPolyFoam CF-200 is specifically designed for cavity fill applications and formulated to be free of scorch when poured in relatively large masses.

**INSTALLATION:** The GacoPolyFoam CF-200 is poured between two 3” thick Quad-Lock Insulated Concrete Forms (ICFs) to create a monocoque assembly that is vapor impermeable. There are no seams and therefore no thermal leaks.

“Working with Gaco was seamless and easy. We appreciated how our rep was informed and able to steer us to a solution that fit our rather unique needs. Also, Gaco was able to work with us to find the perfect formula for a pourable closed-cell foam with maximum yields. We had used other foams before but going forward we will only specify and use Gaco for all Energy Mass wall systems.” stated Cullen Burda, Vice President, Integrated Structures, Inc.