



PLATINUM

Advanced Technologies, Inc.

Build Faster and Better for LessSM



Energy Efficient...

Environmentally Friendly...

Cuts Building Time and Costs...

Creates Stronger, Safer Homes...

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The Company and Its Products

In 2004, Platinum Advanced Technologies, Inc. introduced the greatest advance in building envelope construction in decades. This innovative composite combines structural strength and insulation in a single building product for walls, ceilings and roofs. Our patent-pending Platinum Technology wall, ceiling and roof products are made of light-gage steel, reinforced polyurethane, and any number of customer ordered substrates. The company's product line spans the needs of both residential and commercial builders. These advanced products mean you can build homes that are more *energy-efficient, easier and quicker to install and lowers your overall building costs.*



The need for this technology has never been more critical. Through extensive third party research, it has been proven that injecting polyurethane into building walls can increase their strength by 50%.

Building in the Gulf Coast Region requires stronger, wind resistant methods. Platinum Technology was designed with strong winds or extreme temperature conditions in mind. Our products are a great cost-effective solution to what Mother Nature can throw at us. In late 2007, Platinum Ultimate Products were approved under the Florida Product Approval process.



While Platinum Technology better protects people from Mother Nature's threats, it is equally efficient in helping the nation better manage the reality of rising energy costs. Platinum Technology outperforms most stick-and-batt, unreinforced masonry, steel *and* Structural Insulated Panel construction. Never has it been more important to differentiate your construction projects from those of your competitors.

Regardless of your choices, all of our products offer you and your customer's incomparable features and benefits:

- ❖ **Strength**
- ❖ **Energy Efficiency**
- ❖ **Faster Completion Times**
- ❖ **Fire Resistance**
- ❖ **Termite Resistance**

- ❖ **Smaller Environmental Impact**
- ❖ **Better Air Quality**
- ❖ **No Water Intrusion**
- ❖ **Affordability**



Platinum Performance™ Products

Our Performance products provide residential, commercial and light industrial builders with a competitive edge during today's challenging housing market. Available in both 3^{5/8}" and 5^{5/8}" thicknesses, these

walls have 18- or 20-gage galvanized steel studs, 16 or 24 inches on center and come in varying heights and widths depending on design requirements. We use closed-cell polyurethane injected at thicknesses of 2 to 2^{1/2}" for the 3^{5/8}" walls and 3 to 3^{1/2}" for the 5^{5/8}" walls, providing R-values of 14 to 17 and 21 to 22, respectively. Our Performance line offers increased speed with longer spans; various options for substrates applied in the plant and reduced costs.

Platinum Ultimate™ Products

Our Platinum Ultimate line provides stronger, highly insulated, wall, ceiling and roof products for residential and light commercial builders. Available in 3^{5/8}" and 5^{5/8}" thicknesses, Ultimate products have 18- or 20-gage galvanized steel studs 16 or 24 inches on center and come in varying heights from eight up to 32 feet. Generally, Ultimate products come in 4-foot widths. These products yield incredibly high R-values...23.4 for 3^{5/8}" walls and 36.3 for 5^{5/8}" walls, ceilings and roofs. Competing building envelope products require non-standard dimensions - often a foot thick or more - to achieve similar energy efficiency.



Build Faster and Better Either Way

Building a house with either Platinum Performance or Ultimate products is simple. Both are light and easy to handle. A standard four-by-ten Ultimate wall weighs only about 70 pounds... a ten-by-twelve Performance wall about 140 pounds. You simply screw the wall segments to a steel track securely anchored to the foundation. Each wall, ceiling or roof product connects to another by means of self-tapping screws, and you seal connections with

polyurethane foam. You have a choice of imbedded electrical conduit with Ultimate products, and you install electrical wiring onsite with Performance products. Again, in-field changes are easy to make with either product. Also, you have the flexibility of using almost any roof finishing material with Platinum Technology products. Platinum Technology products meet national and international building codes.



What is “GREEN BUILDING?”

Build Faster and Better For Less

Despite the increasing awareness about green building, there still remains a lot of confusion about what exactly, that is. In an effort to define “Green”, the NAHB has put together a Model Green Home Building Guideline. The Guidelines contain 6 major points:

- 1. *Lot preparation and design*** – Careful planning can reduce the home’s impact on natural features and enhance the home’s long-term performance. Platinum Technology™ can be used in almost any design and can be built and shipped anywhere. Our composite materials make buildings more sustainable and increase structural performance.
- 2. *Resource Efficiency*** – Advanced framing techniques and home designs can effectively optimize the use of building materials, and manage construction waste. Every 2,000 square foot of house built with Platinum Technology saves 100+ trees. Our product is made with recycled material, and our manufacturing is so precise, so efficient, that our products have virtually no loss to scrap or waste, reducing the burden on landfills.
- 3. *Energy Efficiency*** – Create a better building envelope and incorporate more energy efficient mechanical systems, appliances, and lighting, yielding long-term utility bill savings and increased comfort for the homeowner. R-values up to 36.3 for wall, ceiling and roof products, combined with tightness, create the most energy efficient envelopes out there and allow for lower tonnage HVAC equipment.
- 4. *Water Efficiency/Conservation*** – Reduce a home’s water consumption through low-flow fixtures. Platinum Technology is easily cut on site to accommodate any type of plumbing.
- 5. *Occupancy Comfort and Indoor Environmental Quality*** – Effective management of moisture, ventilation, and other issues can create a more comfortable and healthier indoor living environment. Platinum Technology is impervious to Mold, Mildew, Termites, Carpenter Ants, and other Wood Destroying Organisms. Also, there are no Volatile Organic Compounds in our product, providing a healthier, cleaner, more comfortable indoor environment.
- 6. *Operation, Maintenance and Education*** – It would be a shame not to give the home owner guidance on how to optimally operate and maintain it after you put forth so much effort to create it. Platinum feels the same about our product and will personally train your installers to be sure they know and are comfortable with the system, so your home can achieve optimum performance.



Platinum Technology™ & LEED

☼ Innovation and Design Process (ID)

Prerequisite ID 2.1, 2.2- quality management for durability:

P.A.T. product helps achieve this prerequisite

☼ Energy and Atmosphere (EA)

Prerequisite EA 1.1- Energy Star labeled home

P.A.T. product helps achieve this prerequisite

Credit 1.2- Exceptional Energy Star performance
Between 5-10 points

Exact contribution determined by HERS evaluation of design

Prerequisite EA 2.1- Insulation

P.A.T. product helps achieve this prerequisite

Credit EA 2.2- Enhanced insulation
2 points

ONLY IF NOT RECEIVING POINTS FOR EA 1

Required Points	
Certified	45-59
Silver	60-74
Gold	75-89
Platinum	90-136
Total Available Points	136

Prerequisite 3.1- Air Infiltration

P.A.T. product helps achieve this prerequisite

Credit 3.2, 3.3- Better and Best Envelope

P.A.T. product helps achieve 2-3 points

ONLY IF NOT RECEIVING POINTS FOR

Credit 6.2, 6.3- High, Very-high HVAC

P.A.T. product helps achieve 2-3 points

ONLY IF NOT RECEIVING POINTS FOR EA 1

☼ Materials and Resources (MR)

Credit 1.5- Off- Site Fabrication
up to 4 points

Credit 2.2- Environmentally Preferable Materials

.5 points per component used (ext wall, int wall, roof)
Potential 1.5 points if within 500 miles of plant

Credit 3.1 & 3.2- Waste Management

P.A.T. product helps achieve these points (3 possible)

LEED for Homes 2008 Guidelines

LEED Category	Total Points	Possible Platinum Contributions
Innovation & Design (ID)	11	Contributes to Prerequisite
Location & Linkages (LL)	10	
Sustainable Sites (SS)	22	
Water Efficiency (WE)	15	
Energy & Atmosphere (EA)	38	Contributes to Prerequisites & Can assist in 5-10 points
Materials & Resources (MR)	16	Automatic 4 points Can assist in up to 9 points
Indoor Environmental Quality (EQ)	21	
Awareness & Education (AE)	3	



Build Better



Featured on HGTV™ as one of the
Top Five New Products at the
2007 International Builders' Show



Faster Installation Time: “Dry-In” can be complete in days, cutting weeks from overall completion time and by employing fewer contractors.

Ease of Installation: Reduced need for highly paid and skilled craftsmen.

Reduced Waste: With Platinum there is virtually no waste from the walls – Handling and dump fees are reduced.

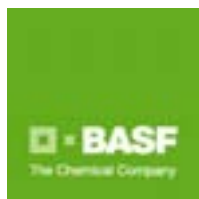
Straight and True Walls: Better dry wall finish and exterior finishes.

Better R-values: Reduces heating and air conditioning costs and improves air quality.

Stronger Shells: Homes have been engineered with our product to withstand 150 MPH winds.

Fire & Smoke Resistance: Class 1 fire rating – Residential and commercially approved.

Versatility: Perfect for luxury, single and multi-family residential housing, shopping centers, commercial offices and industrial building. Accommodates most exterior finishes and roof systems - Any architectural style.



Strategic Partners



❖ Florida Product Approval #9773

- ❖ Testing done through Architectural Testing, Inc. and Texas Tech University
- ❖ Approved by and built in some of the nation's toughest permitting jurisdictions
 - 7 states and
 - 7 Florida jurisdictions
- ❖ Meets international, national, state, and local building codes

Product Technical Specifications "Performance"

OUTER SURFACE: Various substrates, OSB, plywood, Densglass, Tygar, Metal or fiberglass

INNER SURFACE: None. Typically Normal drywall – Field installed
INSULATION CORE: 2-1/2" rigid Polyurethane, 2.2 lbs/ft³ Density, Class 1, Closed Cell Foam.

ADHESION: A strong, durable bond exists between the foam core, steel framing and fiberglass skins created in the manufacturing process.

DIMENSIONS AND WEIGHT:

Wall Product Thickness: 3-5/8" and 5-5/8" Thickness
Tolerance: 1/8"
Standard Width: varies according to design requirements – up to 30ft
Standard Height: 8' – 9' capability of up to 30'
Height Tolerance: 1/8"
Weight: Varies, approximately 1.5 - 4 lbs/ft²

STRUCTURAL PROPERTIES OF FOAM:

Compressive Strength: 35 psi.
Tensile Strength: 58 psi.
Shear Strength: 28 psi.
PMDI
Blowing Agents: Water, HFC-245fa
Density: 2.2# / c.f. in-place density

THERMAL PERFORMANCE:

Conductivity of Foam: 0.155 Btu-in/ft²hr°F
Minimum R Value: 6.45 per inch of thickness.

MOISTURE:

Vapor Permeability: 2-3 perm/in
Absorption: 2.4%
Solvent Resistance: Excellent
Mold/Mildew Resistance: Excellent

FIRE SAFETY:

Foam Fire Rating: Class 1
Smoke Developed: <450 ASTM E-84
Flame Spread: <25 ASTM E-84
Minimum self-ignition temp: 962°F
Minimum flash ignition temp: 794°F

STRUCTURAL INTEGRITY IN FIRE CONDITIONS:

Polyurethane foam is a thermoset plastic and retains its structural integrity until completely consumed by fire. Melting does not occur.

TOXICITY OF COMBUSTION:

The overall toxic potency of the decomposition products released by polyurethane foam is the same as wood or wool under comparable fire conditions.

Product Technical Specifications "Ultimate"

OUTER SURFACE: Biaxial Fiberglass Cloth

INNER SURFACE: Biaxial Fiberglass Cloth

INSULATION CORE: 3-5/8" or 5-5/8" Polyurethane, 2.2 lbs/ft³ Density, Class 1 Closed Cell Foam.

ADHESION: A strong, durable bond exists between the foam core, steel framing and fiberglass skins created in the manufacturing process under heat and pressure.

DIMENSIONS AND WEIGHT:

Wall, and Ceiling/Roof Product
Thicknesses: 3-5/8" and 5-5/8"
Thickness Tolerance: 1/8"
Standard Width: 3' 11-7/8" (Called 4' for discussion purposes.)
Standard Height: 8' – 9' capability of up to 30'
Height Tolerance: 1/8"
Weight: Varies between wall, ceiling and roof product 2-4 lbs/ft²

STRUCTURAL PROPERTIES OF FOAM:

Compressive Strength: parallel 20psi
Compressive Strength: perpendicular 15psi
Polymeric MDI
Blowing Agents: Water, HFC 134a
Density: 2.25#/c.f.

THERMAL PERFORMANCE:

Conductivity of Foam: 0.155 Btu-in/ft²hr°F
Minimum R Value: 6.45 per inch of thickness.

MOISTURE:

Vapor Permeability: 2.27 perm/in
3-5/8" panel .65 PERMS
5-5/8" panel .41 PERMS
Absorption: 1.6%
Solvent Resistance: Excellent
Mold/Mildew Resistance: Excellent

FIRE SAFETY:

Foam Fire Rating: Class 1
Smoke Developed: <450 ASTM E-84
Flame Spread: <20 ASTM E-84
U.L. # R5692
Minimum self-ignition temp: 932°F
Minimum flash ignition temp: 698°F
ASTM D-1929

STRUCTURAL INTEGRITY IN FIRE CONDITIONS:

Polyurethane foam is a thermoset plastic and retains its structural integrity until completely consumed by fire. Melting does not occur.

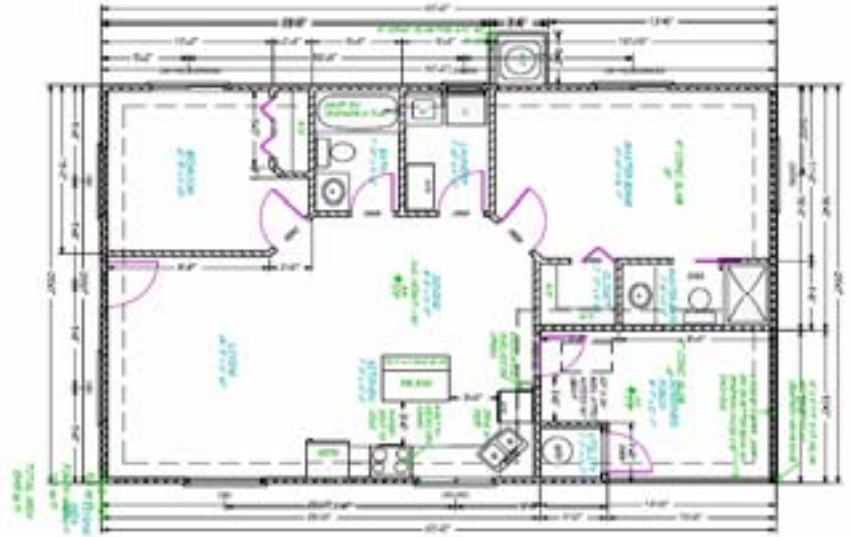
TOXICITY OF COMBUSTION:

The overall toxic potency of the decomposition products released by polyurethane foam is the same as wood or wool under comparable fire conditions.

Build Faster

It is fast and easy to frame a house using Platinum Technology™ products. We have examples of all sizes and types of houses – from 850 to 6,000 Sq. Ft., one-, two- and three-story.

Visit our website – www.platinumadvanced.com or call



The walls and ceilings of this 2 BR/2 BA home were assembled by a four-man crew in 52 man-hours

DAY ONE

Platinum Technology Wall and Ceiling Products arrive on jobsite. Loaded on pallets in sequence of use.



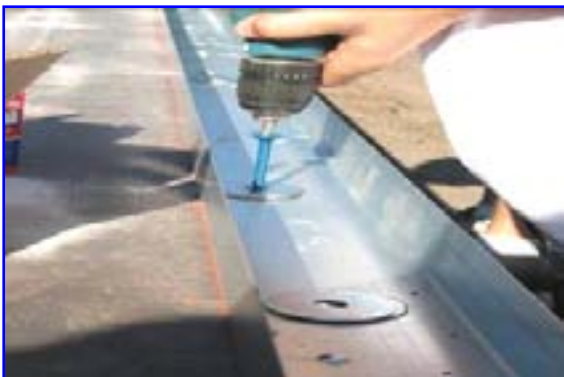
Crew sets track using sealant and anchors. Sealant prevents air, pest infiltration and guards against moisture intrusion and thermal bridging.



Engineers/architects determine anchoring system based on structural requirements, such as resistance to uplift.



Three-fourths of exterior walls are up on Day One. *4 men x 6 hours = 24 man-hours.*



DAY TWO

All foamed exterior and open-frame interior walls are up during morning. *4 men x 3 hours = 12 man-hours (36 man-hours total)*



Walls come with electrical conduit and boxes installed. Conduit feeds through drilled holes in ceiling.



DAY THREE

Ceiling complete. *4 men x 4 hours = 16 man-hours (52 man-hours total project). Contractor's crews and tradesmen work on interior sooner.*



Contractor begins work setting trusses and preparing to install windows and doors on Day Three.



Framing Labor Summary

Exterior Walls	146 linear feet	30 man-hours	≈ 5 linear ft/man-hour
Interior Walls (Preassembled Sections)	79 linear feet	6 man-hours	≈ 13 linear ft/man-hour
Ceiling	1,040 square feet	16 man-hours	≈ 65 square ft/man-hour

Timing assumes all slab preparation, track, anchoring, wall and ceiling placement, product connections, electrical and plumbing modifications. Actual placement of four-foot wall segment requires about 8-10 minutes.

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