

LiteDECK

Insulated Forms for Elevated Concrete



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FLOORS

ROOFS

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TLT-UP

DEVELOPMENTS / SPECIFICATIONS



LiteDeck Floors

A natural pairing with in-floor heating systems, LiteDeck eliminates heavy equipment to set form-work and reduces assembly steps. Lower labor costs and fewer skilled laborers pass on savings to the home owner/user.

Comfort and Design



Along with unmatched energy efficiency, eliminate squeaky floors and noise from up above. LiteDeck isolates sound to each level with an outstanding STC (Sound Transmission Class) of 53.



Add square footage to your home with living space under your garage. No additional support necessary. This option is particularly helpful when you are dealing with a small building structure or other space constraints.

What Makes LiteDeck The Green Choice?

LiteDeck is inherently green by combining 2 major benefits - Energy Efficiency and Sustainability. LiteDeck is the only insulated concrete flooring system to use shape molded components comprised of 100% recycled EPS content. Scrap EPS is reclaimed and molded back into the product to be cast into a floor that will far outlast traditional wood floor systems.



- LEED Points
- Energy Efficiency
- Thermal Mass
- Recycled Content
- Less Waste
- Less Environmental Impact





LiteDeck Roofs

Concrete roofs are now becoming more and more popular with innovations in concrete placing and forming. LiteDeck makes the forming process easier by providing a lightweight formwork that does not require heavy rigging or steel erection.

Safety and Security:

Resist the damaging power of mother nature with LiteDeck. Concrete roofs offer unmatched performance against fire, tornadoes, hail and hurricanes.



FIRE RESISTANCE : Concrete dramatically slows fire from spreading floor to floor and achieves a fire rating of 4 hours.



STORM RESISTANCE: LiteDeck's solid, reinforced concrete joists and cover are recognized by the Federal Emergency Management Agency (FEMA) to be an effective "envelope of protection against deadly weather."

Design Versatility

LiteDeck is commonly used in the construction of hardened structures including: data centers, law enforcement facilities and industrial power plants. Engineered spans of 40' and larger can be designed without additional supporting posts or beams.

- Structural Longevity
- Design Versatility
- Lightweight
- Engineered Formwork
- Fast Track Assembly
- Less Environmental Impact





DECKS

LiteDeck Exterior Decks

Imagine yourself with a deck that will support a jacuzzi tub and heavy winter snow loads. LiteDeck achieves the most complex of design criteria without the need for steel reinforcement and supports. The finished product is a sustainable, maintenance-free outdoor living space. No rot, mold, staining or splinters.

Pre-Assembled Option

LiteDeck is available as a knock down or custom pre-assembled option. Our team will custom manufacture an easy to assemble forming system for your next concrete deck project. The product will be delivered, numbered and ready for quick assembly.

Sustainability

LiteDeck components are designed to lessen environmental impact. Lightweight panels do not require fuel operated machinery to install and Top Hat components are manufactured using post consumer/industrial EPS. The finished product will far exceed the lifespan of traditional wood deck structures.



LiteDeck Concrete Deck

100+ Years

Wood Deck 15 Years

Source: Associated Landscape Contractors of America, Irrigation Association

- Simple Installation
- Carpenter Friendly Design
- Engineered Design
- Easy Finishing to Wood or Steel Ribs
- Recycled Materials
- Less Environmental Impact



TILT-UP

LiteDeck Tilt : Site Cast Construction

LiteDeck TILT is designed for sitecast concrete construction. There are many key benefits of building using sitecast. In-place material costs are more competitive than precast, masonry and steel structures, therefore fewer skilled laborers are needed to achieve high-quality construction. In addition, the speed of erection and ease of subcontractors' work further reduces cost.

Design Versatility

This innovative construction method offers builders and developers a variety of options that ultimately save time, labor and money!



INSULATED

Minimum R-27 Insulating Value | Steel Fastening | Custom Engineered



SANDWICH

Less Concrete - More Insulation | Pre-finish Both Sides | Custom Engineered



NON-INSULATED

Re-use EPS Forms | Stack Casting Saves Time | Custom Engineered



- Fast Track Delivery
- Lower Operating Costs
- Lightweight Panels
- Durability
- Architectural Aesthetics
- Low Maintenance



DEVELOPMENTS

The LiteDeck Development:

LiteDeck is widely accepted around the world for residential and commercial construction. LiteDeck is designed by builders for builders. The options that LiteDeck provides are key to its use in the field and its performance within the building structure. LiteDeck has developed two systems to satisfy the needs of residential and commercial contractors, LiteDeck WRS (Wood Rib System) and LiteDeck SRS (Steel Rib System). Both forming systems have the necessary elements to save energy, time, labor and materials for the designer, developer and builder. To learn more about these high performance building systems, contact LiteDeck at 1.800.551.3313 or visit www.litedeck.com.



LiteDeck Steel Rib System is typically used to achieve large clearspans for floors, roofs, decks and tilt-up applications. This formwork is manufactured to job specific specs and is available in 40+ foot lengths. 18 gauge steel ribs offer tremendous fastening strength and are fire resistant. The steel rib can be cut out and removed after placement of concrete to be reused within the construction of the structure.

- Steel C Channel Embedded
- Custom Lengths - 40+ Feet
- Shiplap or Tongue and Groove Design
- Custom Design Available
- Removable and Reusable Rib



Mostly used in residential applications, the LiteDeck Wood Rib System is a carpenter friendly formwork for jobsite fabrication and concrete forming. Locally available lumber is used in the rib to support the weight of concrete. The wood rib can be removed after placement of concrete to be reused within the construction of the structure. Custom designs and pre-assembly are additional options.

- Local Lumber
- Standard 10' Lengths
- Shiplap or Tongue and Groove Design
- Custom Design Available
- Removable and Reusable Rib

Green Initiatives:

LiteDeck continues to innovate construction materials that are efficient to transport and use on the jobsite, while striving to produce products that lessen environmental impact. These high density EPS Top Hats are molded using scrap EPS reclaimed from our plant and our community (post industrial and post consumer EPS). This highly-efficient insulation is the perfect compliment to any LEED project.



General Specifications
6-inch Base Section – EPS Insulation with continuous interlocking edges and load-bearing beam cavity every 24-inches
Top Hat Sections – 18" X 48" X 2", 4" or 6" depths. EPS Insulation with self-aligning edges
Steel Stiffeners – Continuous 18-gauge steel channel every 12-inches
Transverse Load (Shoring) – ASTM E72-05 Test – Shore in accordance with latest edition of ACI347R.
Concentrated (Temporary) Load – ASTM E661-03 Test – Load in accordance with ASTM Standards.
Maximum Ceiling Load (Channel Withdrawal) – RAD-3862 Test – Safe fastening load is 128 lbs. per lineal foot or 64 lbs. per square foot.
Fire Resistance Rating – ASTM E 119-00 Test – 1.5 hour rating with 250 lb. per square foot load.
Fire Performance Evaluation (w/1/2 inch Drywall) – UBC 26-3 Test – Passed acceptance criteria.
Fire Performance Evaluation (w/out 1/2 inch Drywall) – UBC 26-3 Test – Passed acceptance criteria.
STC (Sound Transmission Class) – STC 57 by Field Test – 14" concrete joist including 3" concrete cover.
IIC (Impact Isolation Class) – IIC 44 by Field Test – 14" concrete joist including 3" concrete cover. IIC 82 by Field Test – 14" concrete joist including 3" concrete cover and 1/2" Carpet w/Pad.
R-Value – C177 or C518 Test – Overall R-26.4 for 6" Base Section. R-4.40 per inch of Insulation.

LiteDeck® (EPS)	Base Section	Top Hat
Type	VIII	XI
Minimum Density pcf	1.15 pcf	.70 pcf
Fire-resistant Bead	YES	YES
Flame Spread, max. 6"	Less than 20	Less than 20
Smoke Development	Less than 300	Less than 300
Compressive Strength, psi	13	5.0
Flexural Strength, psi	30	10
Tensile Strength, psi	17	-
Shear, psi	23	-
Maximum Water Absorption %	Less than 3.0	Less than 4.0
Water Vapor Permeance, perms	3.5	5.0

Estimated Concrete Consumption : Square Feet of Coverage for 1 cubic yard of Concrete at various LiteDeck Thicknesses

Concrete Cover Thickness	6" LiteDeck	8" LiteDeck	10" LiteDeck	12" LiteDeck	14" LiteDeck	16" LiteDeck
2 INCH	110	100	90	76	70	66
2.5 INCH	90	83	76	66	62	58
3 INCH	83	76	71	62	58	55
3.5 INCH	71	66	62	55	52	50
4 INCH	66	62	58	52	50	47
4.5 INCH	58	55	52	47	45	43
5 INCH	55	52	50	45	43	41
5.5 INCH	50	47	45	41	40	38
6 INCH	45	43	41	38	37	35

Project Safety and Performance

Shoring & Bracing - Installer is responsible for the design and correct installation of shoring of form in accordance with the latest ACI (American Concrete Institute) 347R "Guide to Formwork for Concrete".
Reinforced Concrete - Installer is responsible for placement of all reinforcing steel in accordance with the latest ACI 318 "Building Code Requirements for Reinforced Concrete" and latest CRSI (Concrete Reinforcing Steel Institute) standards.
Concrete Placement - Installer is responsible for compliance with latest ACI-614 Code (Handling) and ACI-301 and 306 Codes for cold and hot weather concrete placement.
 Any variance from ACI or CRSI standards must be certified in advance by a Structural Engineer, who is licensed for the jobsite's location and specifications.



25 Years of Construction Industry Commitment

LiteDeck is known globally as the builder's choice for energy efficient forming of elevated concrete. We stand behind our products and offer training and support to the building industry including: free training, design services, custom engineering and support. LiteDeck is manufactured by certified manufacturers around the world. 25 years of successful business as an Insulated Concrete Form developer/manufacturer is proof that we are 100% committed to the construction industry and are focused on providing a trusted forming system for years to come.

Architect and Engineer Manual and CD



A Design Manual and CD is available from the LiteDeck Service Center. It contains valuable information to assist in the design process for the engineer or architect. Contact LiteDeck for more information.

1.800.551.3313 | www.litedeck.com

Dealer

Regional Manufacturers

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