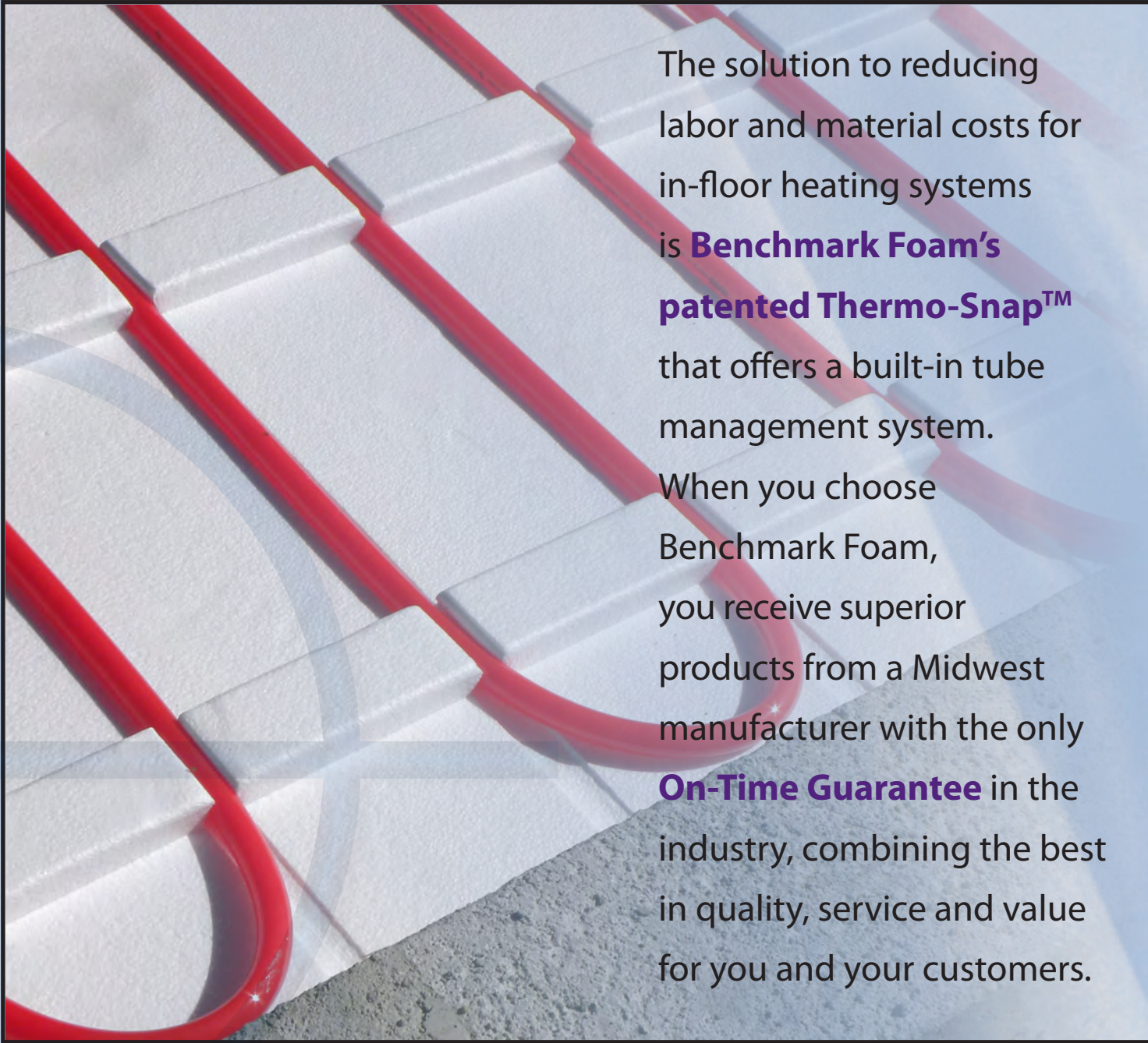


THERMO-SNAP™

by Benchmark Foam

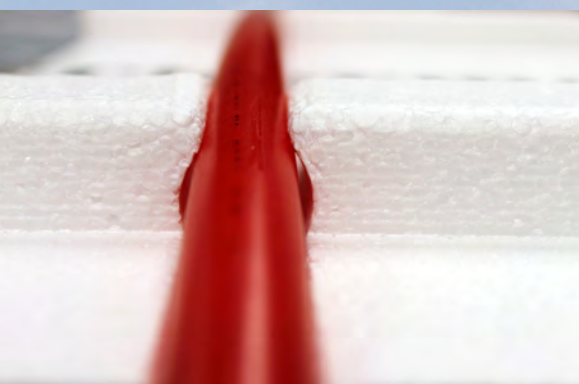
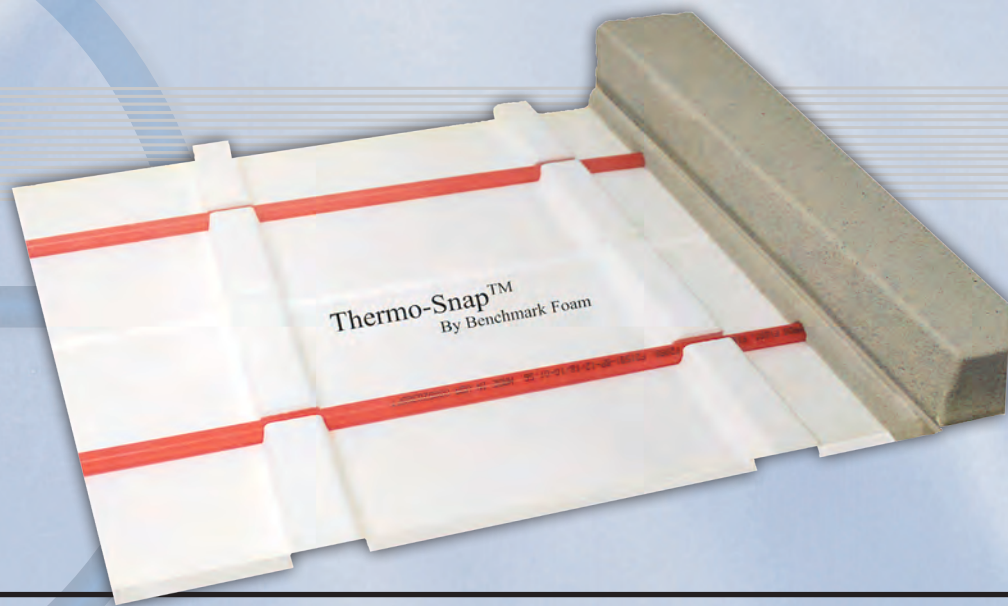


The solution to reducing labor and material costs for in-floor heating systems is **Benchmark Foam's patented Thermo-Snap™** that offers a built-in tube management system.

When you choose Benchmark Foam, you receive superior products from a Midwest manufacturer with the only **On-Time Guarantee** in the industry, combining the best in quality, service and value for you and your customers.

 **BENCHMARK FOAM INC.**

Quick response is our guarantee.



THERMO-SNAP™ ADVANTAGES

Patented Thermo-Snap™ panels reduce labor and material costs with a tube management system built into the EPS (expanded polystyrene) insulating panel.

FAST - SIMPLE - SECURE

- Quick, easy PEX tube installation cuts labor costs.
- Panels hold PEX in place during concrete pour - no float or displacement.
- Retains strong bond with concrete.
- Accurate PEX placement provides quick, professional appearance.
- Compact size makes it easier to level on imperfect grade.

COST EFFECTIVE

- Predetermined tube placement ensures even spacing and heating.
- Minimal staple usage means saving on materials.
- Save time measuring by using 6" or 12" centers to guide rebar placement.

VERSATILE

- Panels are easily trimmed to accommodate custom shapes.
- Standard panel accommodates 1/2" or 5/8" tube pathways on 6" centers.
- Customize panel to accommodate 3/4" tube pathways or 3" centers.
- Can be customized to specific panel and PEX sizes.

ENERGY EFFICIENT

- Acts as a stable thermal barrier to reduce heat loss.
- Maintains stable R-Value of 8.1 or above.
- Optimal radiant heat effectiveness is achieved with PEX at the bottom of the concrete slab.

Thermo-Snap™ patent number: D654600

Call Benchmark Foam at 800-658-3444

or visit us online at www.BenchmarkFoam.com

THERMO-SNAP™ APPLICATIONS

RESIDENTIAL

- Popular to use in basements, garages and four season rooms, and can be used throughout any residential structure.
- Easily trimmed to accommodate drain pipes or ornate foundation layout.
- Can be incorporated into your design for under driveways or walkways as ice melt.
- Creates ideal heating for living spaces while allowing for maximum home design flexibility.

COMMERCIAL

- Creates a more stable, even heat in outbuildings and work shops.
- Convenient size panels allow for quick layout before installing PEX tubing.
- Can qualify for green building programs, such as LEED.
- Made in the U.S., Thermo-Snap™ can help projects qualify for stimulus awards.
- Acts as a complimentary product for all ground source heat pump (GSHP) systems.

ON-TIME GUARANTEE

- Guarantees delivery by agreed-to date or 10 percent off.
- Gives customer confidence, even if order needs to be rushed.
- No truckload quotas.
- Only On-Time Guarantee in the industry.
- Assures customer needs with quick response customer service.

THERMO-SNAP™ 25

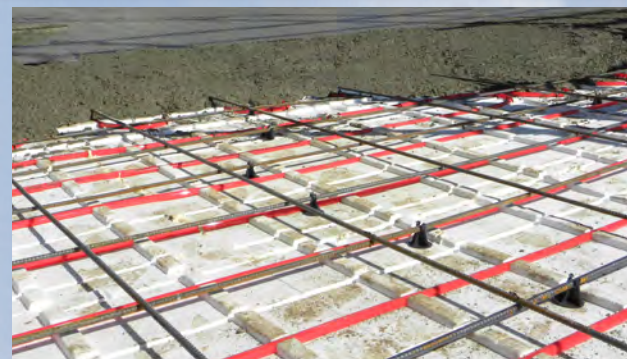
- Offers same advantages, but with a higher compressive strength (25 psi) compared to standard Thermo-Snap™ (16 psi).
- Used under concrete slabs that are intended to accommodate greater live loads on a regular basis.
- Attains constant R-Value of 8.7 at 2-inch thickness.
- Same standard sizes and custom sizes available.
- See back page for full EPS properties of Thermo-Snap™ 25



Thermo-Snap™ proved to be a worthy fit for this residential project that required several cutouts and a distinctive perimeter.



Installers at this commercial truck shop appreciated the quick and easy application of Thermo-Snap™ for this 7,000-sq-ft building.



PHYSICAL PROPERTIES OF EPS

Property	Units	ASTM Test	Values Meet or Exceed ASTM C578	
			Thermo-Snap™	Thermo-Snap™ 25
Density, min.	lbs/ft ³	C303 or D1622	1.25	1.80
Thermal Resistance "R Value"	Two inches thick	C177 or C518	@ 40° F 8.8 @ 75° F* 8.1	9.5 8.7
Strength Properties, minimum				
Compressive (@ 10% deformation)	psi	D1621	16.0	25.0
Flexural	psi	C203	30.0	50.0
Moisture Resistance				
Water Absorption (by total immersion, max.)	vol %	C272	3.0	<2.0
Water Vapor (Permeance, max.)	Perms	E96	3.5	2.5
Buoyancy Force	lbs/ft ³		61.3	60.0
Oxygen index, min.	vol %	D696	24.0	24.0
Flame Spread @ 6"		UL® (BRYX)	20	20
Smoke Development		UL® (BRYX)	300	300

All values are based on data available from Flint Hills Resources, NOVA Chemical Company and BASF Corporation.

*Federal Trade Commission ruling: Use the 75° R-Value when calculating R-Values for residential construction (fact sheet available upon request).

DESIGN CONSIDERATIONS

Flammability: Like many construction materials, expanded polystyrene (EPS) is combustible. It should not be exposed to flame or other ignition sources. Current building code requirements should be met for adequate protection or separation from occupied areas.

Water Absorption Properties: EPS water absorption is low. Moisture takes the path of least resistance and travels around individual beads rather than through them; the non-interconnecting cell structure prevents capillary absorption.

Water Vapor Transmission: EPS has low permeability, but is not considered a vapor barrier.

Solvent Exposure: EPS is subject to attack by petroleum-based solvents and adhesives, and coal-tar pitch products. Care should be taken to prevent EPS direct contact with these products and their vapors. Use only adhesives approved for EPS applications.

Thermo-Snap™ patent number: D654600

ON-TIME GUARANTEE

Benchmark Foam knows your business depends on our product arriving on time. Our service response is so dependable we back it with our On-Time Guarantee. Your product will be shipped and arrive on the agreed-to arrival date or we will discount your invoice 10 percent. We work to accommodate customer needs, giving you confidence when you place an order, even if it needs to be rushed. And we do not have truckload quotas, so no matter how large or small, your order will ship on time.



Quick response is our guarantee.

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