



**Who can benefit from TekFoil™
Reflective Insulation? See inside.**

- *Reflects heat energy and light* ... keeps heat in when you want it, out when you don't!
- *Clean, safe, inert materials* ... non-carcinogenic, no special protective clothing needed!
- *Easy to install* ... do it yourself with just scissors, measuring tape, and stapler!
- *Lightweight, compact, pliable* ... easy to handle, inexpensive to ship!
- *20 Year Warranty* ... tough materials resist tearing and puncturing!



**A versatile, efficient insulation system for ceilings, walls,
floors, and more! Keeps BTUs where they belong!**



*Top quality, state-of-the-art
— and safe! — energy
insulation system*



TekFoil™ reflects 97% of radiant heat movement. When you hold a sheet close to your face, you will feel the warmth of your own infrared rays bouncing back at you! Emissivity (absorption) of TekFoil™ is only 3%.

No more clumsy, dangerous installations! TekFoil™ is safe, easy to install!

(And that saves you time, money ... and your health!)

Forget what you thought you knew about installing insulation. With TekFoil™, all you need are scissors, measuring tape, and a staple gun. No need for masks, gloves, or other protective clothing. Lightweight materials are non-toxic, non-allergenic, and non-carcinogenic. Chemically inert TekFoil™ insulating materials are safe for the environment too!

Who should use TekFoil™ Reflective Insulation?

In every climate, insulation is needed either to keep heat in, keep heat out, or both. Not every type of insulation answers both needs, but reflective insulation does. Use it inside buildings to retain needed heat in colder months, saving on heating costs. Use it with reflective side out to reflect heat away during warmer months, and save on air conditioning costs. In colder climates, use it to boost the R-value of existing insulation. In hotter climates, use it on roofs or outside walls to keep heat and sunlight out.

The durability and versatility of TekFoil™ Reflective Insulation make it the preferred choice for agricultural, metal, and industrial building use, where it is commonly used on walls, roofs, ceilings (as interior finishing), attic barriers (over existing insulation), and vegetable and fruit storage (to retain high humidity). See pages 2-7 for more applications.

- **Fact:** Up to 93% of heat flow in or out of a building is radiant heat waves.
- **Fact:** TekFoil™ reflects 97% of radiant heat transfer.
- **Fact:** TekFoil™ can retain or deflect up to 90% of total heat flow (93% x 97%).

Outstanding Characteristics of TekFoil™ Hi-Performance Reflective Insulation



- R-Values unaffected by humidity and water.
- 100% waterproof.



- Radiant energy reflectivity up to 97%.
- Energy transfer kept to minimum levels.



- Non-support of bacteria and fungi.
- Discourages insect and rodent nesting.



- Environmentally safe. Non-toxic. Non-allergenic. Anti-static.
- Unaffected by ultraviolet rays.



- Chemically inert.
- Lightweight and flexible.
- Electromagnetic field barrier.



- Thermal barrier inhibits condensation.
- Radon barrier.
- No capillarity.



- Easy to install. Scissors and foil are all you need.
- Convenient roll lengths.
- Shipped in plastic bags for easy storage.



- Great retrofitting over existing insulations.
- Allows easy passage of plumbing & electrical fixtures.
- No shrinkage, or tearing.
- Highly light reflective.

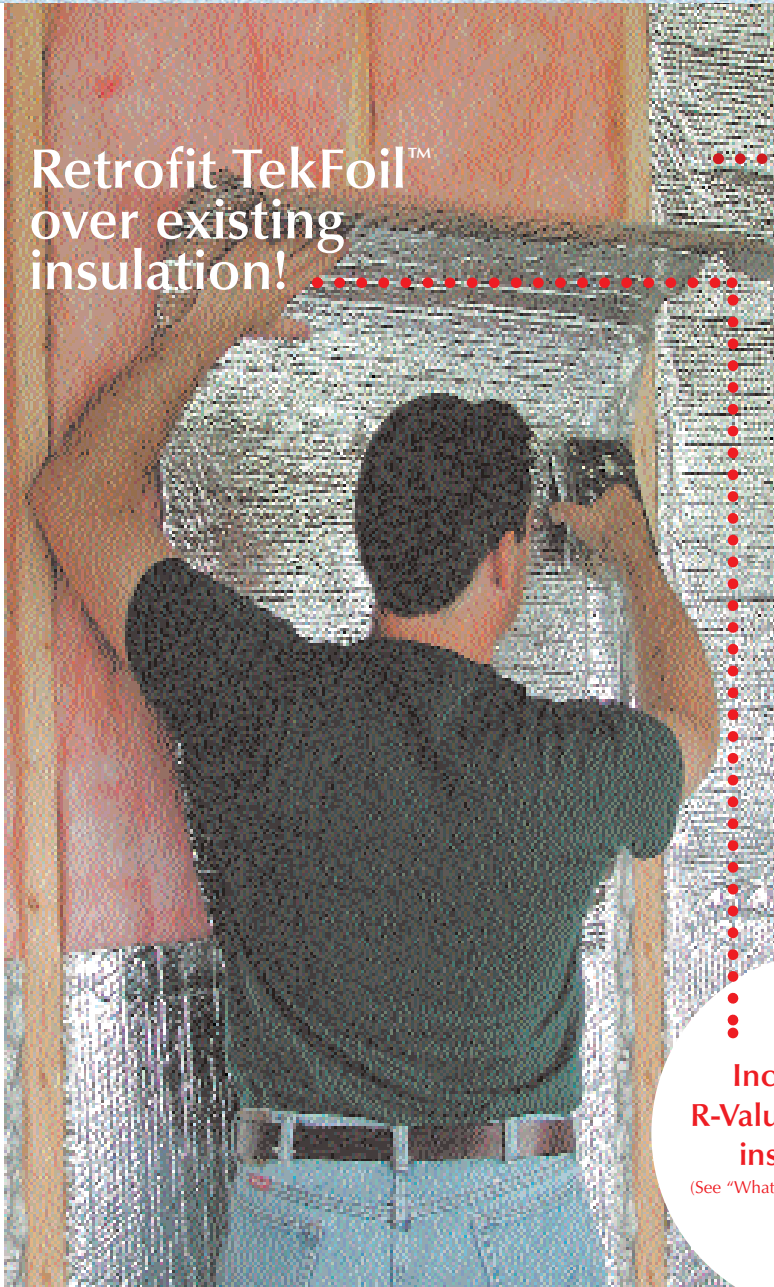


- Stops air infiltration for better ventilation and temperature control.
- Long life aluminum resists moisture and corrosion.



Our vast selection of TekFoil™ materials allows for a variety of applications including wall, attic, floor and concrete slab.

Retrofit TekFoil™ over existing insulation!

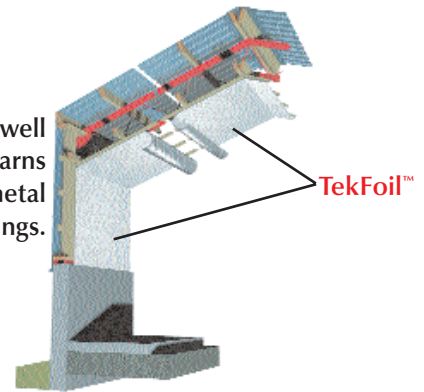


Ceilings & Walls

TekFoil™ lasts longer because it discourages bird, insect, and rodent nesting.

- **Reduce energy consumption!** Space Age thermodynamic technology saves on fuel costs in winter, air conditioning costs in summer.
- **Effective vapor barrier!** Will not tear, crack, or crush.
- **Easy to install!** Retrofits quickly over existing insulation.

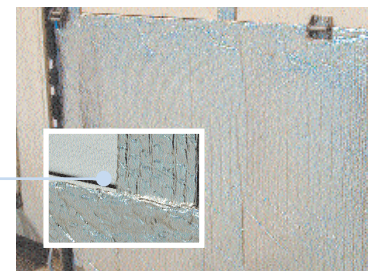
TekFoil™ is well suited for barns and metal buildings.



Increase the R-Value of current insulations.
(See "What is R-Value" on page 5)



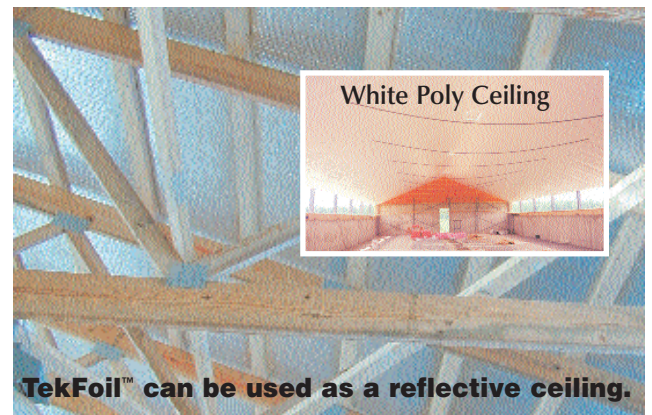
There should be an air space, of 5/8" minimum, between TekFoil™ and other surfaces for it to be most effective.



You can use TekFoil™ to insulate your garage door!



TekFoil™ recommendations:
F/B/F, F/BB/F, RB.



White Poly Ceiling

TekFoil™ can be used as a reflective ceiling.

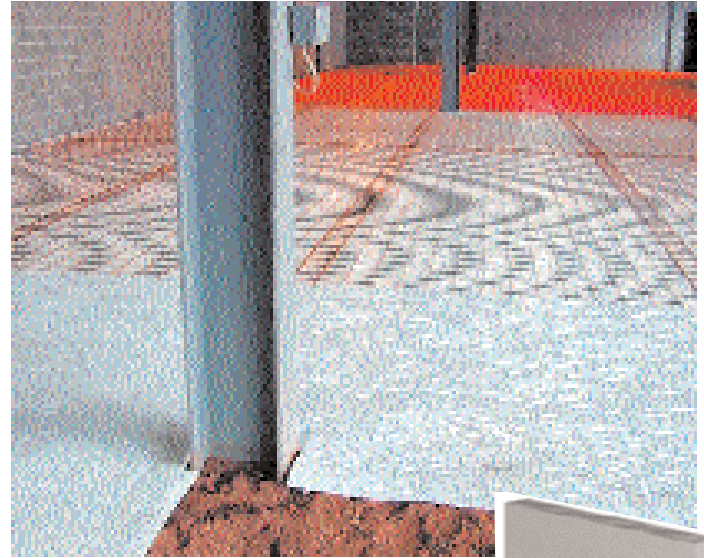
Concrete Floors and Slabs

Build a barrier against radon, vapor, and moisture ... and enhance radiant heating systems, too!

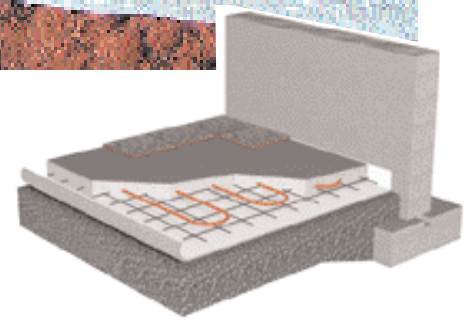
- **Block radon!** This poisonous gas can permeate concrete, but not TekFoil™.
- **Block vapor and moisture!** Concrete is porous and holds moisture, but TekFoil™ underneath repels moisture, keeping basements drier.
- **Double radiant floor heating effectiveness!** TekFoil™ reflects radiant heat, directing it where you want it to go: UP! (See page 4 for more information.)

TekFoil™ recommendations:

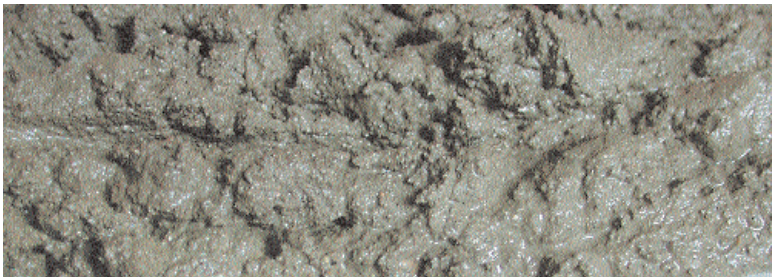
F/BB/WP



Radiant floor heating system before concrete is poured



TekFoil™ keeps heat inside, increases system efficiency and helps radiate energy in concrete.



Pour cement directly on TekFoil™, white poly side up in slab applications.

Installation Method:

1. Unroll TekFoil™.
2. Overlap seams 2 inches. Let material go up to 6 inches along wall.
3. Seal seams with TekFoil™ white vinyl tape 2" wide.
4. Install wire mesh and piping system following manufacturer's recommendations.
5. Pour concrete.



Radiant Barrier (House Wrap)

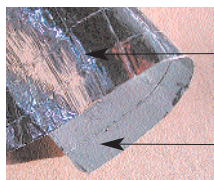
Save money on your heating and cooling costs!

Primary uses

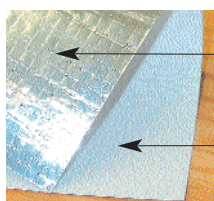
- For attic or crawl spaces.
- Coolers or cold rooms.
- House or building wrap.

Advantages

- Reflects 97% of the radiant heat waves.
- Only 3% emissivity.
- Not affected by moisture or humidity.
- Class 1 material (15 Flame Spread and 0 Smoke Generation when tested to ASTM E-84).
- Easy to install. No special tools or protective clothing.
- Discourages rodent nesting.

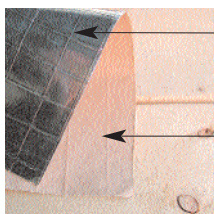


Foil



Foil

White poly



Foil

Kraft

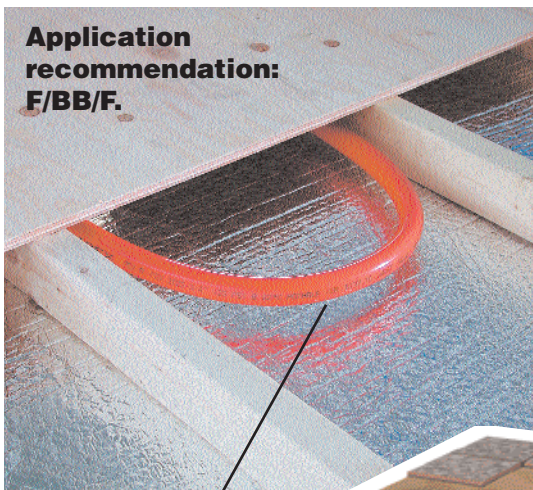
TekFoil™ recommendations:

FIRE RETARDANT FOIL (FRFF)
HUMIDITY RESISTANCE: NON-CORROSION AFTER 30 DAYS @ 122°F & 95% RH
WEIGHT: 12 LBS PER ROLL/MSQ.FT.
TEMPERATURE RESISTANCE: -40°F TO 180°F (-20°C TO 82°C)
FLAME SPREAD: 15
SMOKE GENERATION: 0
STANDARD ROLLS: 50" X 250' (1042 SQ.FT.)
FOIL-WHITE WOVEN (FWW)
REFLECTIVITY: 97%
EMISSIVITY: 3%
STANDARD ROLLS: 50" X 250' (1042 SQ. FT.)
FOIL-KRAFT (RBFK)
REFLECTIVITY: 97%
EMISSIVITY: 3%
STANDARD ROLLS: 50" X 250' (1042 SQ.FT.)

Radiant Heating

Double efficiency of radiant coils!

Application recommendation:
F/BB/F.

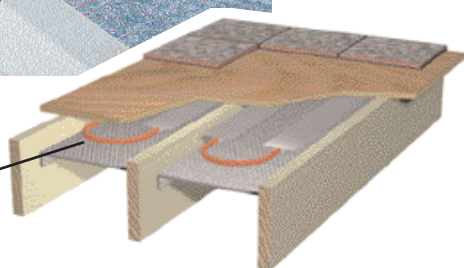


- Reflects maximum radiant energy into the room!
- Heat is focused upward when TekFoil™ is installed between floor joists.
- Keeps rooms warm and dry.

How to Install:

1. Select 16" width roll of TekFoil™
2. Use TekFoil™ Staple Tab underneath the radiant heat loops stapled to the floor joists.

Radiant heat loops under a wood floor



Staple Tabs direct 100% of radiant heat in the proper direction.



Fast Facts About Insulation

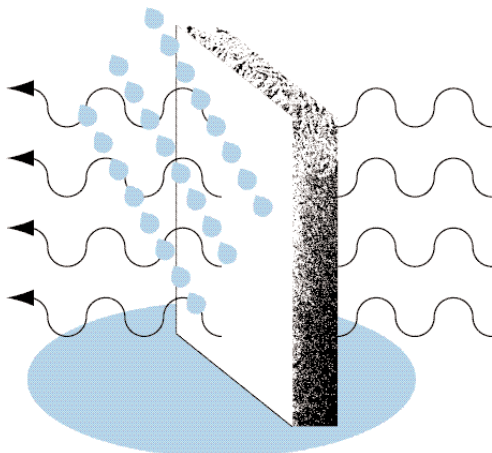
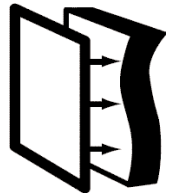
Insulation Type	Advantages	Drawbacks	R-Value
Batts & Blankets	Cost, Convenience	Clumsy; invites nesting of rodents; protective clothing recommended	Varies with thickness
Loose fill-blown	Used for retrofits	Special equipment needed; not for do-it-yourselfers	Relatively low
Foam	Energy efficient	Flammable; difficult to fit in existing buildings	Relatively high
Loose fill-poured	Fills hard-to-reach cavities	Loose fill settles over time	Low
Rigid boards	Structurally strong, low in weight	Flammable; expensive to install	High
TekFoil™ Reflective Insulation	Easy to install; moisture & vapor barrier; lightweight, safe, long-lasting, low cost; keeps heat out, too, not just in	In cold climates, best when used to enhance existing insulation	Varies; can boost R-Value of existing insulation up to R-14.5

What is R-Value?

R-Value:

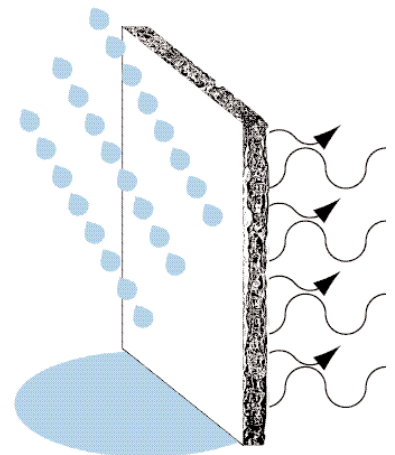
R-Value is a measure of insulation's effectiveness against conduction. The higher the R-Value, the less heat is conducted through the insulation. R-Value is widely believed to be the most important criterion for insulation's overall effectiveness, but in fact conduction is only 10% of the heat flow equation. R-Value does not measure the effectiveness of stopping heat flow by convection (up to 25%) or radiation (up to 93%).

TekFoil™ is great for retrofitting over existing insulations.



Standard insulation loses R-value.

For every 1% of moisture absorbed by standard insulation, the R-Value is reduced by 35%. TekFoil™ will not absorb moisture or create condensation build-up.



TekFoil™ keeps moisture out and heat in.

TekFoil™ Varieties

F/B/F (foil/bubble/foil)

F/BB/F (foil/bubble-bubble/foil)

Layers of aluminum radiant foil sandwiched around one or two layers of polyethylene bubbles. The laminated construction provides a thermal barrier and inhibits condensation. Great flexibility makes it easy for wrapping pipes and ducts to insulate and reduce noise vibration. It acts as both a radon and vapor barrier, can be used alone or with mass insulation, and is easy to install in retrofit applications. Use it to double the R-Value of existing interior wall insulation or to add up to R-14.3 to ceiling or floor systems.

Primary uses

- Wall or ceiling insulation.
- Metal building insulation.
- Pole building insulation.
- Commercial building insulation.
- Factory-built housing insulation.

Advantages

- Reflects 97% of radiant heat waves.
- Easy to install — no special tools or protective clothing needed.
- Moisture resistant.
- Does not provide nesting area for rodents.
- Class 1 material/10 Flame spread and 30 smoke development when tested to ASTM E-84.
- Easy to store and transport. 60 PSI crushing resistance.

Technical Data

- 4'W x 62.5'L roll, square edge.
- 2', 4', 6' and 8'W x 125'L rolls, square edge.
- 4', 6' and 8'W x 125'L rolls, quick seam.
- 16"W x 125'L roll, staple tab.

F/B/WP (foil/bubble/white poly) F/BB/WP (foil/bubble-bubble/white poly)

A single or double layer of polyethylene bubbles bonded between a layer of 97% pure aluminum radiant barrier and a sheet of white polyethylene. An effective vapor and radon barrier when installed under a concrete floor, this variety of TekFoil™ insulation replaces up to 2" of rigid insulation.

Primary uses

- Under concrete insulation.
- Ceilings and walls in ag. buildings.
- Under radiant heating systems.

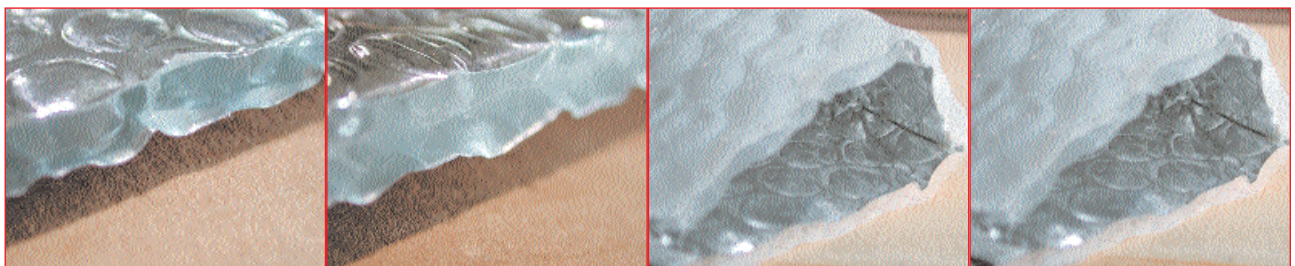
Advantages

- Safe, easy to install.
- Equivalent to R-10 under concrete insulation.
- Not affected by moisture or humidity.

Technical Data

- 2', 4'W x 62.5'L rolls, square edge.
- 2', 4', 6' and 8'W x 125'L rolls, square edge.
- 4', 6' and 8'W x 125'L rolls, quick seam.

Special sizes available on request.



TekFoil™	F/B/F	F/B/B/F	F/B/WP	F/B/B/WP
Thickness	3/16" (4mm)	3/8" (8mm)	3/16" (4mm)	3/8" (8mm)
Weight	1.04 oz/sq.ft (317 gr/sq.m)	1.35 oz/sq.ft (382 gr/sq.m)	.095 oz/sq.ft (291 gr/sq.m)	1.16 oz/sq.ft (355 gr/sq.m)
Roll Weight 4' x 125'	32.45 lbs. (13.52 kg)	42.2 lbs. (16.49 kg)	29.74 lbs. (13.52 kg)	36.3 lbs. (16.49 kg)
Flame Spread	10 (ASTM E-84)	10 (ASTM E-84)	10 (ASTM E-84)	10 (ASTM E-84)
Smoke Development	30 (ASTM E-84)	30 (ASTM E-84)	30 (ASTM E-84)	30 (ASTM E-84)
Crushing Resistance	40 PSI	60.05 PSI	40 PSI	60.05 PSI
Flexibility	No cracking (ASTM E-96)	No cracking (ASTM E-96)	No cracking (ASTM E-96)	No cracking (ASTM E-96)
Thermal Resistance	R4 to R10	R6 to R14.6	R4 to R8	R5 to R12.5
Emissivity	3%	3%	3%	3%
Reflectivity	97%	97%	97%	97%
Water Vapor Permanence ASTM E-96	1.5 Perms	1.5 Perms	1.5 Perms	1.5 Perms
Temperature Range	-50°F to +200°F	-50°F to +200°F	-50°F to +200°F	-50°F to +200°F
Linear Shrinkage	None	None	None	None
Resistance to Fungi	Yes	Yes	Yes	Yes

Good insulation saves money! But how do you find the best value?

The volatility of global energy markets continually puts oil, gas, and electricity (which depends on imported fuels) at risk. The best defense is to conserve energy with an insulation system that pays for itself in reduced heating and air conditioning costs!

The right amount of insulation, properly installed, is one of the most cost-effective ways to reduce energy consumption, control rising fuel and electricity costs, and provide a more comfortable living environment all year long.

TekFoil™ Reflective Insulation saves money two ways:

1. It keeps heat in and cold air out in the winter.
2. It keeps heat out during the summer and warmer months.

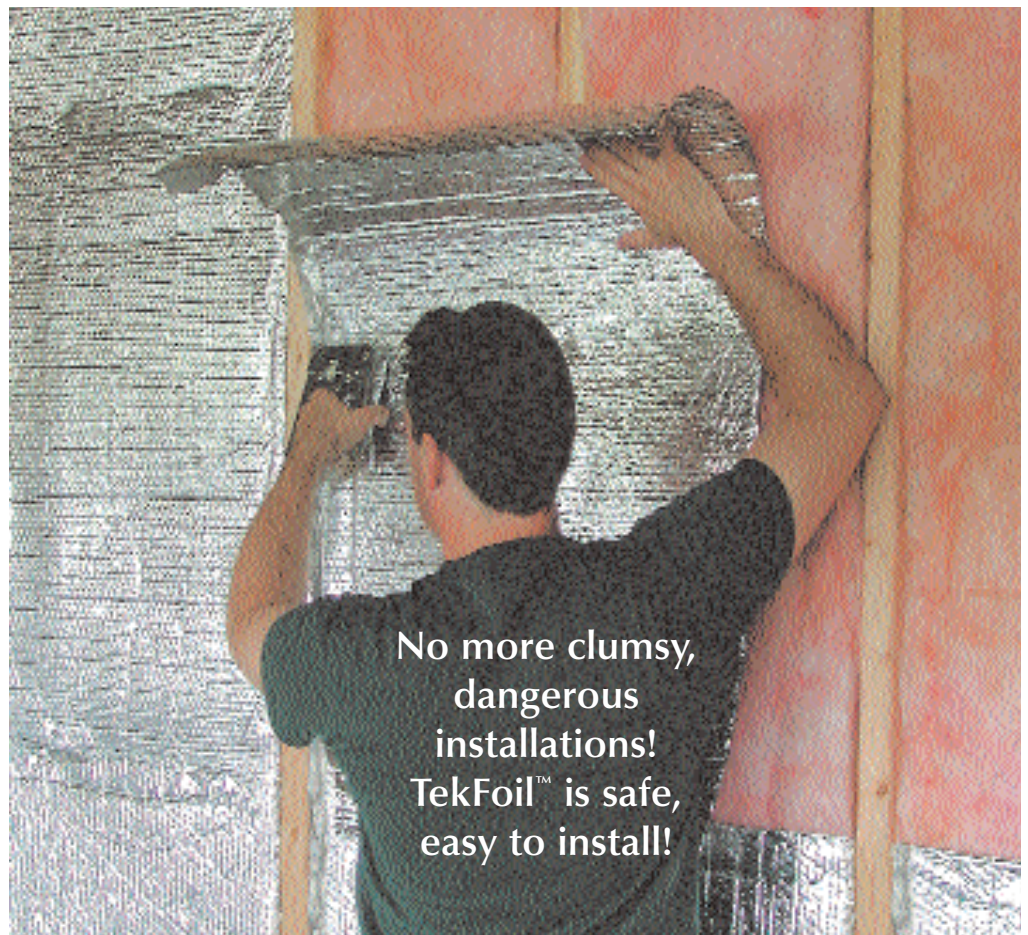
Best of all, TekFoil™ is easy to install! No protective clothing is required, and you already have all the tools you need: scissors, measuring tape, and a staple gun.

Whether you're looking for radiant barriers, ceiling and wall insulation, under-concrete applications, or radiant heating enhancements, TekFoil™ makes an insulating product that will last for years and years ... guaranteed!

Bubble, bubble, foil ... no trouble! The secret is in the materials!

TekFoil™ uses several combinations of non-toxic, chemically inert, lightweight materials bonded together to form long-lasting, state-of-the-art, high-performance energy insulation systems. Our reflective insulation reduces radiant heat transfer across open spaces, minimizing heat gain in summer and heat loss in winter.

Non-heat-conducting polyethylene bubbles are layered between sheets of heat-reflective aluminum foil and/or white polyethylene to form radiant barriers on one or both sides. Used as a stand-alone insulation in agricultural and industrial buildings, it greatly improves climate control. Used as supplementary insulation in colder regions, it can double the R-Value on interior wall insulation.



No more clumsy,
dangerous
installations!
TekFoil™ is safe,
easy to install!

TekFoil™ 20 YEAR WARRANTY

ESAPCO warrants its TekFoil™ products against all defects in material and workmanship for 20 years from the date of purchase.

ESAPCO's obligation under this limited warranty is limited solely to the repair of, or replacement of, the defective products at ESAPCO's option. ESAPCO will not be liable for any loss or damage arising from the use of or inability to use or from the abuse of our products.