



ASTRO-FOIL[®]
Reflective Insulation

The Revolutionary

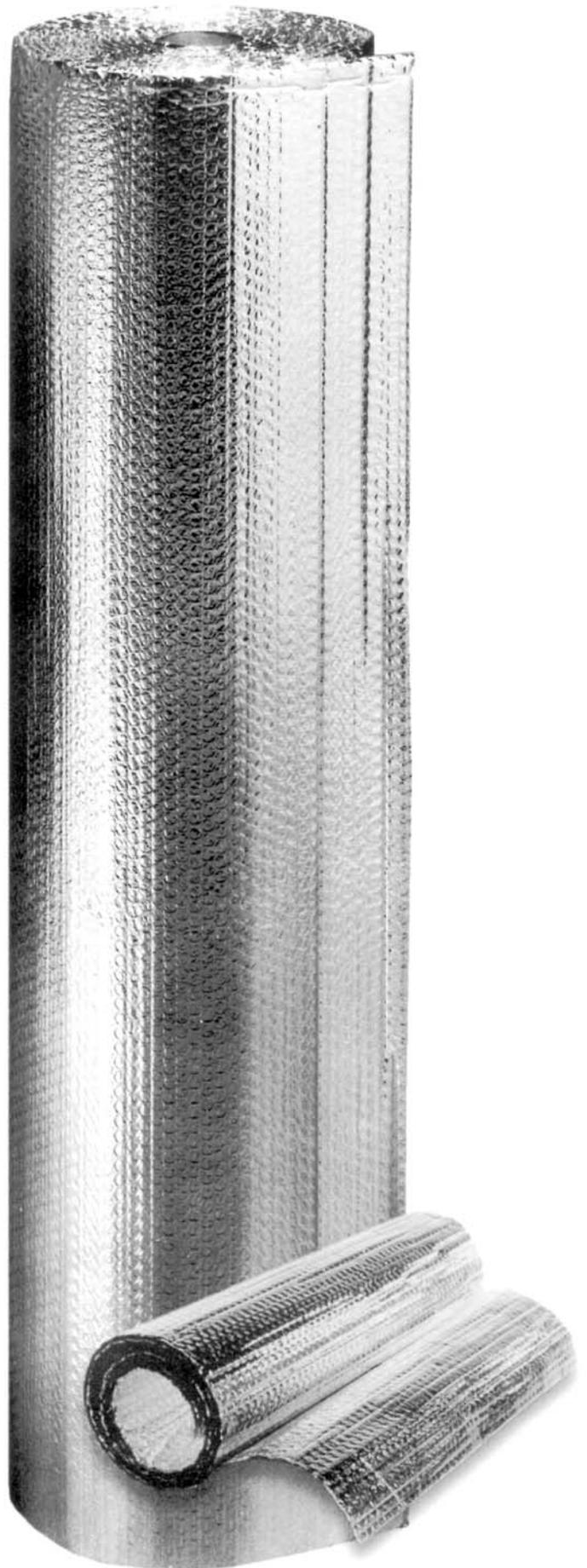
Insulating Material

That's Safe,

Effective, Versatile

And Easy To Install

Reflective Insulation

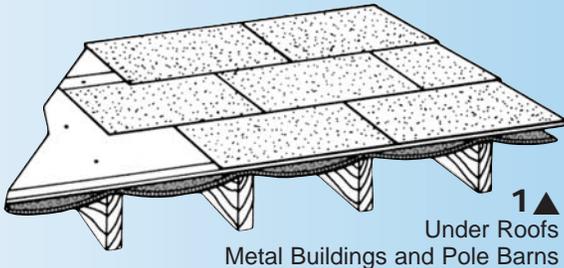
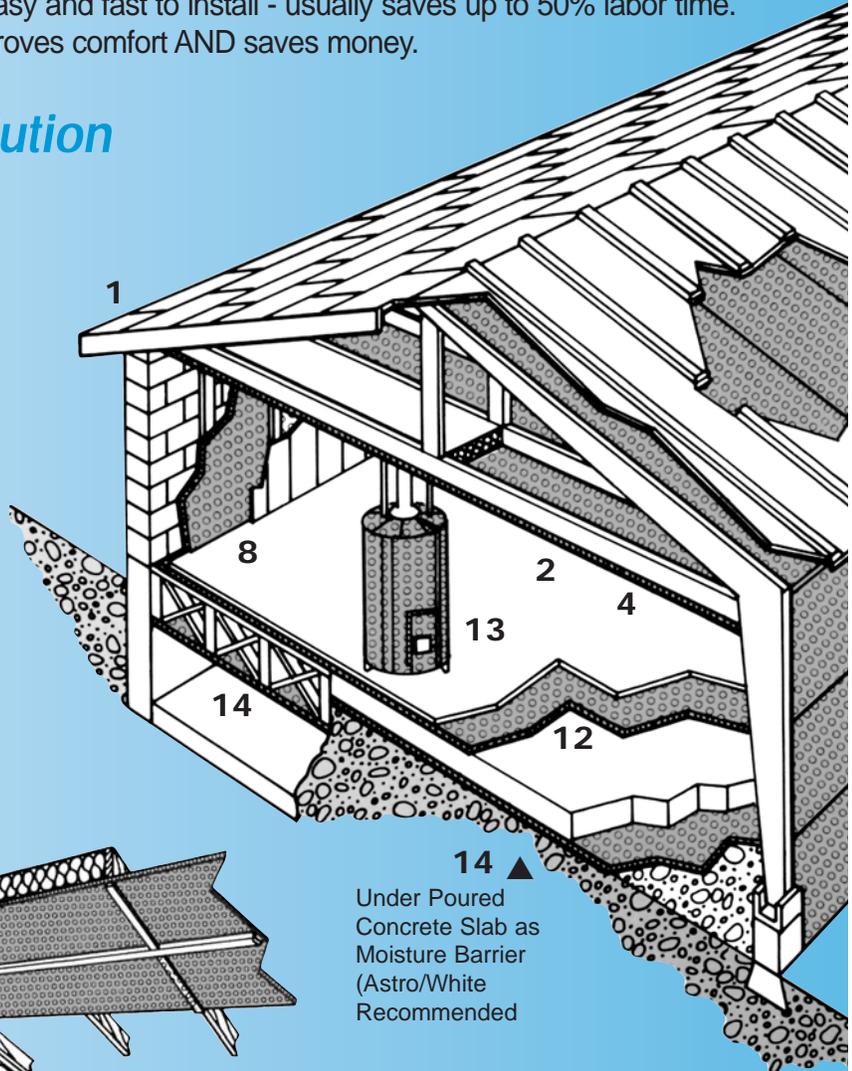




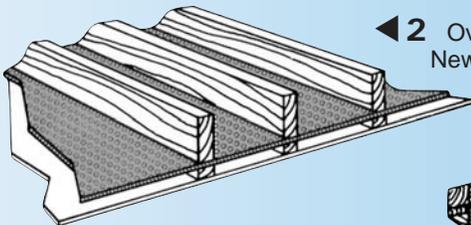
ASTRO-FOIL® Reflective Insulation

It reflects heat - keeps buildings warm in Winter and cool in Summer.
It stops air infiltration - seals drafty buildings.
It acts as a vapor barrier.
It is strong, light weight, clean and does not degrade over time.
It is easy and fast to install - usually saves up to 50% labor time.
It improves comfort AND saves money.

The versatile insulation solution

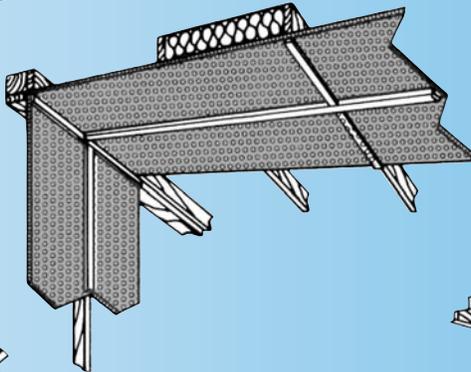


1 ▲
Under Roofs
Metal Buildings and Pole Barns

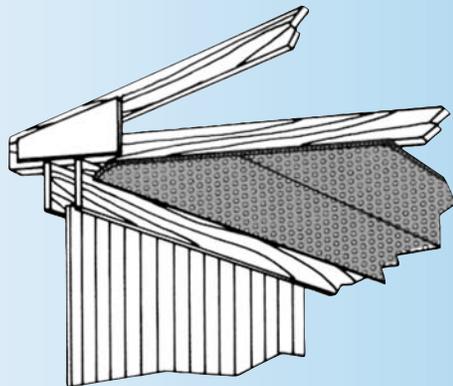


2 ▲
Over Ceilings
New or Retrofit

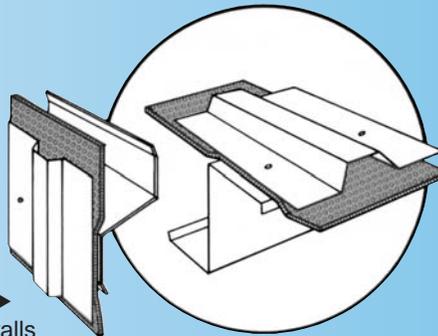
3 ▶
To Support Mass Insulation
and as Interior Vapor Barrier



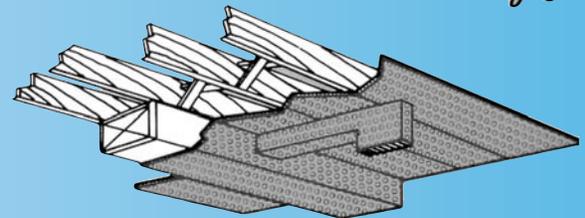
14 ▲
Under Poured
Concrete Slab as
Moisture Barrier
(Astro/White
Recommended)



4 ▲
Retrofit Under Ceiling Joists
Also Increases Illumination



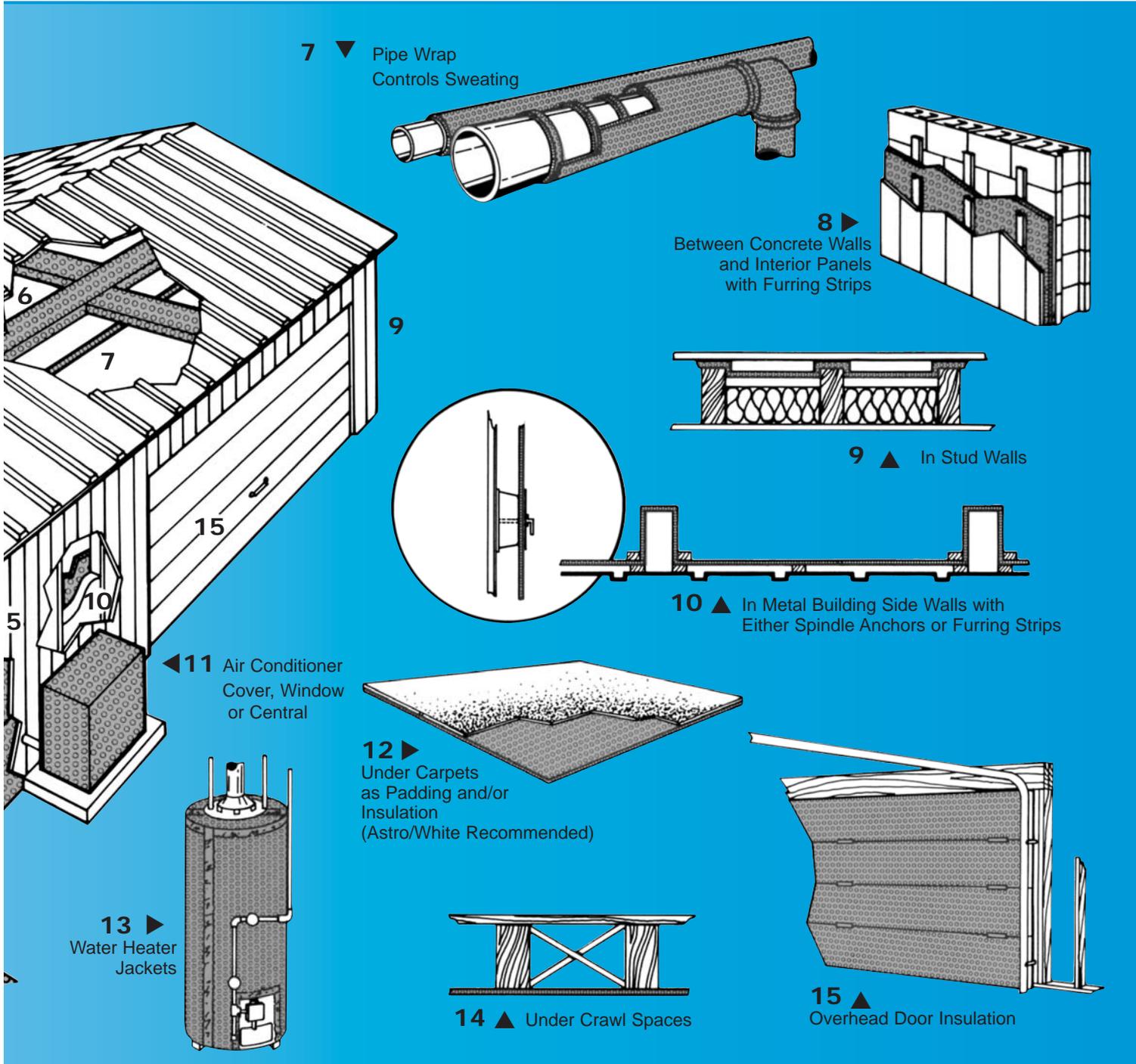
5 ▶
In Metal Building Sidewalls
or Under Roofs



6 ▲ Duct Wrap

BASIC TOOLS NEEDED:

- Staple gun
- Razor knife
- Aluminum tape
- Scissors
- Tape measure



7 ▼ Pipe Wrap Controls Sweating

8 ► Between Concrete Walls and Interior Panels with Furring Strips

9 ▲ In Stud Walls

10 ▲ In Metal Building Side Walls with Either Spindle Anchors or Furring Strips

11 ▲ Air Conditioner Cover, Window or Central

12 ► Under Carpets as Padding and/or Insulation (Astro/White Recommended)

13 ► Water Heater Jackets

14 ▲ Under Crawl Spaces

15 ▲ Overhead Door Insulation

GUIDELINES FOR ALL ASTRO-FOIL INSTALLATIONS

1. ASTRO-FOIL works best when there is a 3/4" air space on each side of the insulation. (Larger air space is fine but a smaller one reduces its thermal effectiveness.)
2. ASTRO-FOIL should always be installed on the inside of the structure.
3. ASTRO-FOIL will not cure existing problems. Leaking roofs, rot or mold situations or other moisture or structural problems should be corrected before installation.
4. Any deteriorated wiring should be replaced prior to installing ASTRO-FOIL.
5. ASTRO-FOIL should be at least 3" from any heat producing fixtures, chimneys, blowers, etc. NEVER install ASTRO-FOIL directly above lighting or other heat producing devices.
6. Always turn off all electricity in the area when installing ASTRO-FOIL.

Reflective Insulation

ASTRO-FOIL REFLECTIVE MATERIAL

ASTRO-FOIL reflective installation consists of two layers of aluminum foil laminated to the outside of two layers of heavy-duty polyethylene air-bubble cushioning. These bubbles form trapped air spaces between the foil surfaces to give the structure excellent “R” values. Because ASTRO-FOIL II is also impervious to moisture and air currents, it is an ideal convection and vapor barrier. ASTRO-FOIL’S surfaces reflect heat in both directions to keep you warm in the Winter and cooler in Summer.

Some of the many uses for ASTRO-FOIL

In Agricultural Buildings
 In Beverage Coolers
 In Commercial Buildings
 In Confinement Structures
 In Industrial Buildings
 In Warehouses
 In Workshops
 In Post Frame Construction
 Behind Freezers

Behind Woodstoves
 Behind Refrigeration Coils
 For Concrete-Curing Blankets
 Under Tents
 Under Sleeping Bags
 Under Mattresses
 As Padded Foot Warmers
 As Cargo Liners in Trucks
 As A Window Covering

As A Survival Blanket
 As Pharmaceutical Packaging
 As Duct Wrap
 On Overhead Doors

TECHNICAL DATA

	ASTRO-FOIL	ASTRO-E
Thickness:	5/16" Nominal (8mm)	3/16" Nominal (6.35,,)
Weight:	1.25 oz. per sq. ft. (382 g/m ²)	.811 oz. per sq. ft. (207 g/m ²)
Flame Spread (ASTM E-84-81A):	20 Flame/30 Smoke	15 Flame/30 Smoke
Fire Rating:	Class A/Class 1	Class A/Class 1
Linear Shrinkage:	None	None
Puncture Resistance:	66 lbs. per sq. in. (455 kPa)	63 lbs. per sq. in. (434 kPa)
R-Value*	15 (down) 7.31 (Horiz.) 5.4 (Up)	14.5 (Down) 7.0 (Horiz.) 4.9 (Up)
Emittance C1371:	0.03-0.04	0.03-0.04
Reflectance:	0.96-0.97	0.96-0.97
Degradation:	0	0
U-Value (Btu/ft. ² hr°F):	0.0820 (down) 0.119 (Horiz.) 0.139 (Up)	0.0771 (down) 0.109 (Horiz.) 0.119 (Up)
Water Transmission Rate ASTME96:	0.02	0.02
Fungi Resistant		

HUD/FHA Projects: Meets HHI 1252B / California License: TF1213 / California Registry: CAT213 (NJ) / Canada CMHC 11978

* These values are obtained in a C236 hot box test and represent the R-Value of the cavity that includes the surround air spaces. The measurements were made in a cavity framed with standard 2"x4" lumber. For complete details regarding methodology, contact your nearest innovative Energy Sales Office. ASTRO-FOIL’S ability to reflect heat in open applications is not fully measured by this test. It’s that extra reflective capability that makes it possible for ASTRO-FOIL to keep people and animals comfortable all year long.

Compliance Agency/Organization	ASTRO-FOIL	ASTRO-E
1995 CABO One and Two Family Dwelling Code	Section 319.1	Section 319.1
California Bureau of Home Furnishings Insulation program (Reg.No.)	CA-T338	CA-T338
City of Los Angeles	RR-8403	RR-8403
Miami Dade County, Florida Building Code and Product Review Committee	98-0413.01	98-0413.01
Minnesota Department of Energy	Yes	Yes
1999 National Building Code	Section 803.4	Section 803.4
1997 Standard Building Code	Section 803.2	Section 803.2
1997 Uniform Building Code	Section 707.3	Section 707.3

WARNING: Reflective bubble-pack insulation will ignite if exposed to fire or sufficient heat and intensity. Protect insulation from exposure to open flame or other ignition sources during shipping, storage and installation.

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