

# TECHNICAL BULLETIN

Bulletin TB09  
June 2023

## AP ArmaFlex® Insulation Tape Instruction Guide

### Armacell Insulation Tape

#### Description

AP ArmaFlex Insulation Tape is made of high-quality ArmaFlex foam insulation, an elastomeric thermal insulation material. The tape is 2" wide x 30' long x 1/8" thick and supplied in rolls. ArmaFlex Insulation Tape provides a fast, easy method of insulating pipes and fittings. It is used to control condensation drip from domestic cold water, chilled water, and other cold piping and fittings and to reduce heat loss when applied to hot water lines up to 180°F.

ArmaFlex Insulation Tape may also be used in conjunction with ArmaFlex pipe and sheet insulation to provide reinforcement to seams glued with ArmaFlex 520 adhesive and to insulate short lengths of pipe and fittings in congested or hard-to-reach areas.

#### Advantages

**Attractive appearance** – clean, smooth, black surface gives insulated lines a neat, consistent appearance.

**Closed cell structure** – seals out air and moisture by forming a vapor barrier when properly wrapped.

**Low “k”** – efficient insulating properties retard heat flow, keeping cold lines cold and hot lines hot.

**Convenient and easy to use** – release paper is easily removed, tape wraps quickly, and sticks in place firmly. No bands, wires, or additional adhesive is needed.

#### Directions for Applying AP ArmaFlex® Insulation Foam Tape

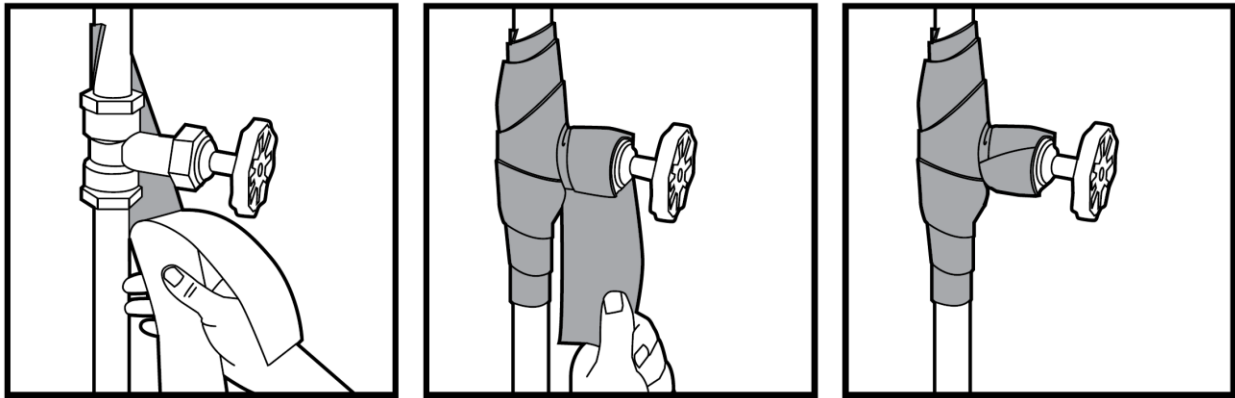
AP ArmaFlex Insulation Tape is applied by removing the release paper as the tape is spirally wrapped around the piping or fitting and pressed firmly in place. Avoid stretching the tape as it is wrapped. Pressure-sensitive adhesive, factory applied to the ArmaFlex Insulation Tape, adheres firmly and forms a long-lasting bond with metal and other surfaces.

The first layer of tape should be applied as a spiral wrap with each wrap overlapping the previous one by 50%. The overlapping ensures there is not a direct path for water vapor to enter or heat to escape. Subsequent layers are applied to achieve the desired thickness and may be done with a 50% overlap or a single layer according to Table 2. In order to control condensation on cold piping, the number of layered wraps required must be sufficient to keep the outer insulation surface above the dew point of the air. On hot lines, the number of layered wraps is dictated only by the amount of energy savings that is desired.

On dual-temperature lines, any number of wraps sufficient to control sweating on the cold cycle is usually adequate for the heating cycle.

To insulate valves, tees and other fittings, small pieces of tape should be cut to size and pressed into place with no metal exposed. The fitting then is additionally over-wrapped with longer lengths for a durable and efficient job.

NOTE: Do not apply tape on lines operating above 180°F and turn off any cold system that is actively condensing before applying the tape. The taping surface must be clean, dry, and oil free.



**Table 1:**

Typical Properties of AP Armaflex Insulation Tape	
Thermal conductivity Btu • in/h • ft <sup>2</sup> • °F	0.25
75°F mean temperature	0.256
90°F mean temperature	
Upper temperature use limit	Up to 180°F
Water Vapor permeability, perm-in.	0.05
Water vapor permeance, perm	0.4

**Table 2:**

Use this table to determine the proper installation method recommended to achieve condensation control for specific conditions.

Thickness Needed to Control Pipe Sweat		
Air Temp Pipe Temperature and Relative Humidity	Pipe Temperature 50°F	Pipe Temperature 35°F
80°F & 50% RH	50% Overlap	50% Overlap
85°F & 70% RH	50% Overlap plus Single Layer	50% Overlap plus 50% Overlap

For more information, please visit:  
[www.armacell.us](http://www.armacell.us)