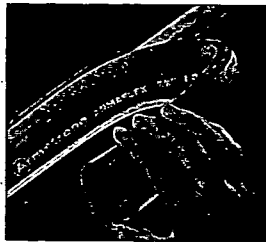
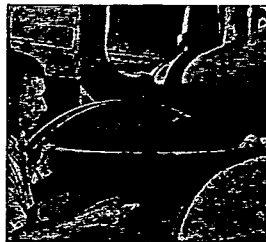




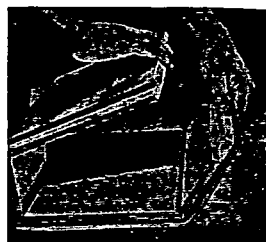
ARMSTRONG INSULATION PRODUCTS FOR MECHANICAL SYSTEMS



Armaflex® Pipe Covering



Armaflex Sheet



Armaglas® Duct

Armaflex Insulations

Armstrong Armaflex is a foamed plastic insulating material available in flexible and rigid pipe covering and in flexible sheet form. These insulations are used to prevent excessive heat gain or loss and to stop damaging condensation and frost formation on liquid cooling and heating lines, chilled water and other piping, and on ducts, tanks, vessels, and equipment of all types.

Armaflex Insulations have a fine, closed cellular structure and are vapor barriers in themselves, so no separately applied vapor barrier is required. The extreme flexibility of Armaflex 22 Pipe Covering and Sheet Insulation speeds and simplifies their application. Rigid Armaflex has load-bearing properties and can be used at hanger locations and on piping subject to mechanical abuse or compression. All three products are non-shiny black in color, have smooth surfaces, and are exceptionally clean to handle.

Because of high insulating efficiency and vapor resistance, Armaflex Insulations in engineered wall thicknesses will prevent condensation under varying design conditions.

For specific thickness recommendations, call your nearest Armstrong Office.

Typical Physical Properties of Armaflex

	Armaflex Insulations Including Rigid
Density, lb/cuft, (avg.)	5-6
Upper use limit, F	220
Lower use limit, F	-100
Thermal conductivity, Btu/hr sqft (F/in)	0.26
Thermal stability, % shrinkage	5.5-6.5
28 days, 220F	less than 0.1
Water vapor transmission, perm-in (C355-63T wet cup)	1.7
Water absorption, % by volume	less than 10
28 days Immersion	ASTM D1056-62T
Air transmission	cuft/hr sqft/in; 10" water
Ozone resistance	good
Odor	negligible
Fire rating, ASTM D-1692-59T	self-extinguishing by this test

	Armaflex 22 Pipe	Armaflex 22 Sheet
Well thickness, inches (nominal)	1/4, 1/2, 3/4	—
Inside diameter, inches	3/8 to 10 3/4	—
Length of sections, feet	6	—
Width and length, inches	—	36 x 48
Thickness, inches	—	1/4 to 1
		(1/4" increments)

Armaglas Duct

There are two types of Armstrong Armaglas Duct Systems—rectangular and round. The rectangular system is shop or field fabricated from a factory-made glass-fiber board with a full-hard aluminum facing. The round system is made up at the factory in 6-foot lengths with aluminum or vinyl-plastic casing and is shipped ready to install.

Both types are designed for residential or commercial forced-air heating and air-conditioning applications and combine air duct, thermal insulation, and sound absorber in one easy-to-install material.

Boards for the rectangular system are made in 1" and 1 1/2" thicknesses, 48" wide, and in lengths from 48" to 120". The 6-foot lengths of the round system are available with inside diameters from 4" to 36".

The glass fibers used in making up rectangular and round duct are molded to a density of 3 to 3 1/2 pounds per cubic foot.

Typical Properties of Armaglas Duct

Shape	Round	Rectangular
Thermal conductivity, Btu/hr sqft (F/in) 75F mean temperature	0.22	0.22
Maximum upper temperature limit for continuous use, F (internal air)	250	250
Maximum internal static pressure, inches of water	1 1/4	—
Plastic casing	8	2
Aluminum casing	—	—
Air erosion (3500 ft/min air velocity) (2000 ft/min air velocity)	None	None
Fire resistance (CS-131-46, modified for pipe covering)	incombustible	incombustible
Flame spread U-L building unit fire hazard classification	—	5-10
Plastic casing (Aluminum pigmented polyvinyl chloride)	—	—
Thickness, inches	.004	—
Water vapor transmission, perms (ASTM wet cup)	1.12	—
Fire resistance	Self-extinguishing	—
Aluminum casing	—	—
Thickness, inches	.003	.003
Water vapor transmission, perms (ASTM wet cup)	0	0
Fire resistance	Incombustible	Incombustible

OUR NITROGEN-FILLED ACR TUBE. HOW IT KEEPS OXIDE SCALE OUT OF REFRIGERATION CIRCUITS.

Oxide scale is a product of brazing. It forms on the inside wall of the ACR tube, then drops off to contaminate the entire circuit. It could have happened in the most careful installation. But now the most careful installation employs Phelps Dodge Nitrogen-filled ACR tube.

You start with a perfectly clean and dry tube. The nitrogen is plugged in. It stays in until the plug is removed. Then it escapes very slowly, keeping impurities from entering the tube. The same happens during brazing. Only in addition to keeping impurities out, the nitrogen virtually eliminates the formation of scale.

Unused portions of tube do not lose their protection even if they have been temporarily unplugged. To repeat, the gas escapes quite slowly. A sufficient amount will remain in the tube to protect it for future use. The sooner it is replugged however, the more nitrogen there will be left in the tube. The only tool required for the removal and insertion of the plugs is a pair of pliers.

Use our Nitrogen-filled ACR tube on your next installation. It is available through Phelps Dodge wholesalers in 1/4" O.D. through 1 1/4" O.D. It's the best quality insurance you can buy.

